08-SBd-40-PM R100.0/R154.6
EA-Project No. 0R140-0812000024
EA 0R141 (PM R100.0/R125.0)
EA 0R142 (PM R125.0/R154.6)
201.015 (HB-1)
June 2015

Project Study Report

To

Request for Programming in the 2016 SHOPP Long Lead Project

On Route 40

Between Essex Road Overcrossing (PM R100.0)

And California/Arizona State Line (PM R154.6)

APPROVAL RECOMMENDED:

RAFIH ACHY
PROJECT MANAGER

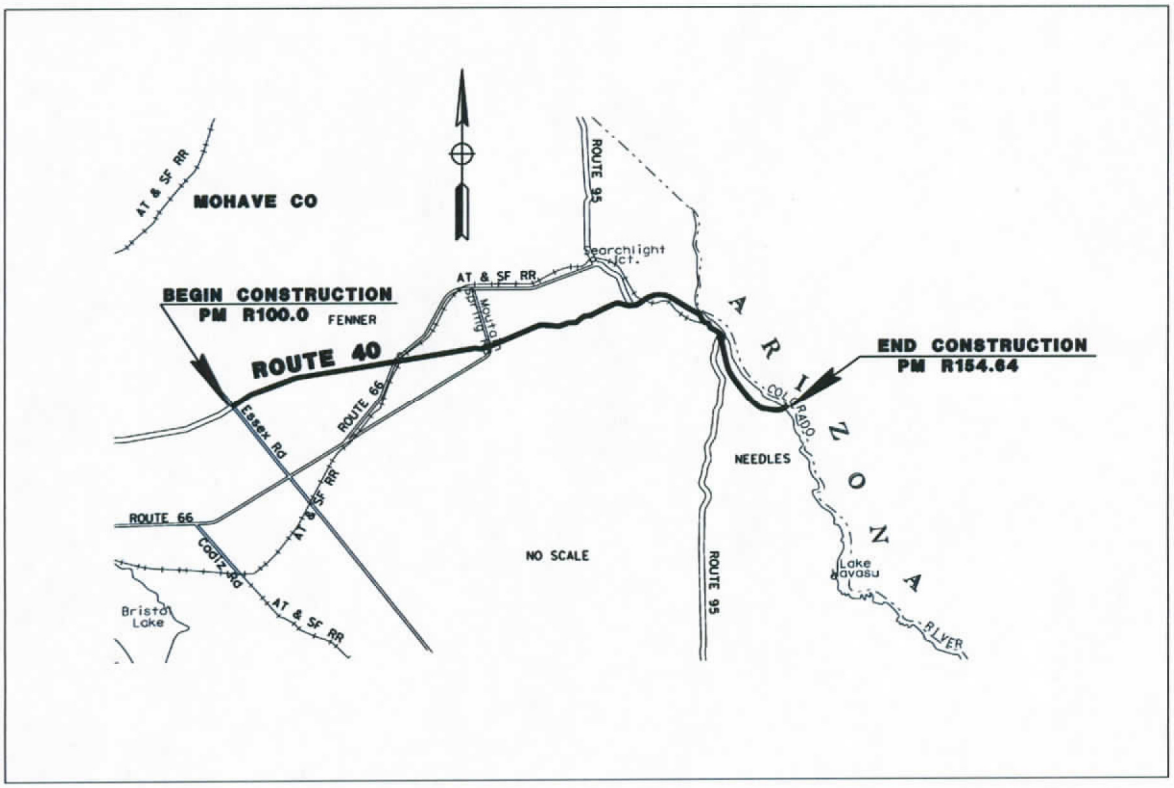
APPROVED:

JOHN BULINSKI
INTERIM DISTRICT 8 DIRECTOR

6/30/15
DATE

08-SBd-40-PM R100.0/R154.6
EA-Project No. 0R140-0812000024
EA 0R141 (PM R100.0/R125.0)
EA 0R142 (PM R125.0/R154.6)
201.015 (HB-1)
June 2015

Vicinity Map



On Route 40

Between Essex Road Overcrossing (PM R100.0)

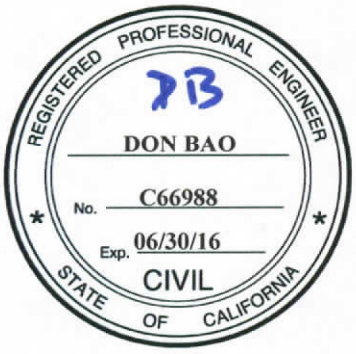
And California/Arizona State Line (PM R154.6)

This project study report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Don Bao 6/29/15

DON BAO *DATE*

REGISTERED CIVIL ENGINEER



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1. INTRODUCTION

This Project Study Report (PSR) proposes to regrade the existing median cross slopes within the thirty (30) feet clear recovery zone (CRZ), from 6:1 or steeper gradient to 10:1 or flatter on Interstate 40 (I-40) from Essex Road Overcrossing (PM R100.0) in Fenner to California/Arizona State Line (PM R154.6) near the City of Needles, in the County of San Bernardino. This project is currently planned to be divided into two (2) segments due to the lengthy project limits and complexities of the Environmental Documents. The planned segments and location breakdown are as follows:

Segment	EA	Project No.	Location
1	0R141	0815000200	PM R100.0/R125.0
2	0R142	0815000201	PM R125.0/R154.6

This project is classified as a Category 4B project as defined in the Project Development Procedures Manual (7th Edition, Part 2, Chapter 8, and Section 5) because the proposed improvements under consideration would not require additional right of way and do not substantially increase traffic capacity. The project category assignment was approved by the Deputy District Director for Design on May 15, 2015 (Exhibit F). The total estimated cost for the proposed improvements is **$ 66,412,000** including support, right of way and construction costs. The funding for the Project would be from the State Highway Operation and Protection Program (SHOPP) under the Collision Severity Reduction Program (201.015). Both segments of the project will be programmed for long lead projects in the 2016 SHOPP. Segment 1 is planned to be delivered in 2020/2021 fiscal year and Segment 2 is planned to be delivered in 2022/2023 fiscal year. There is no known opposition to this project.

See the detailed cost estimate in Attachment A for specific work items included in this project.

Segment 1 (EA 0R141)

Project Limits	08- SBD - 40- PM R100.0/R125.0
Number of Alternatives	2
Alternative Recommended for Programming	Alternative 2
Current Capital Outlay Support Estimate	$ 9,200,000
Current Capital Outlay Construction Costs	$ 22,000,000
Current Capital Outlay Right of Way Estimate	$ 5,006,000
Funding Source	SHOPP-201.015
Funding Year	2020/21
Type of Facility	Freeway

Number of Structures	None
SHOPP Project Output	25.0 Miles of regrading cross slope median
Anticipated Environmental Determination or Document	Caltrans is the lead agency under both the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). For CEQA compliance, the Division of Environmental planning anticipates the Environmental Determination (ED) for the proposed project will be an Initial Study (IS) or a Focused Initial Study (FIS) with proposed Negative Declaration (ND) or Mitigated Negative Declaration (MND), and for NEPA compliance an Environmental Assessment with Finding of No Significant Impact
Legal Description	On Interstate 40 in San Bernardino County, near Needles from Essex Road Overcrossing (PM R100.0) to 4.5 miles East of Homer Wash Br (PM R125.0), re-grade cross slopes median.
Project Development Category	4B

Segment 2 (EA 0R142)

Project Limits	08- SBD - 40- PM R125.0/R154.6
Number of Alternatives	2
Alternative Recommended for Programming	Alternative 2
Current Capital Outlay Support Estimate	$ 8,200,000
Current Capital Outlay Construction Costs	$ 17,000,000
Current Capital Outlay Right of Way Estimate	$ 5,006,000
Funding Source	SHOPP-201.015
Funding Year	2022/23
Type of Facility	Freeway
Number of Structures	None
SHOPP Project Output	29.6 Miles of regrading cross slope median
Anticipated Environmental Determination or Document	Caltrans is the lead agency under both the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). For CEQA compliance, the Division of Environmental planning anticipates the Environmental Determination (ED) for the proposed project will be an Initial Study (IS) or a

	Focused Initial Study (FIS) with proposed Negative Declaration (ND) or Mitigated Negative Declaration (MND), and for NEPA compliance an Environmental Assessment with Finding of No Significant Impact
Legal Description	On Interstate 40 in San Bernardino County, near Needles from 4.5 miles East of Homer Wash Br (PM R125.0) to State Line of California/Arizona (PM R154.64), re-grade cross slopes median.
Project Development Category	4B

A project report will serve as approval of the "selected" alternative.

2. BACKGROUND

Interstate 40 (I-40) is a major transcontinental freeway that begins at the junction with Interstate 15 (I-15) in Barstow. It traverses portions of California, Arizona, New Mexico, Texas, Oklahoma, Arkansas, Tennessee and North Carolina. Crossing the United States, it terminates in Wilmington, North Carolina (2,554 miles).

Within District 8, I-40 is 154.6 miles long. The California portion of it terminates at Arizona State Line, near Topock, Arizona. The California portion of I-40 is entirely within District 8. It passes the cities of Barstow and Needles, and the desert communities of Daggett, Newberry Springs, Ludlow and Fenner.

Within the project limits, I-40 consists of a four-lane divided freeway with truck climbing lanes at major grades. A dirt median which is variable in width, separates the roadbeds. It I-40 provides for the safe and efficient interregional and interstate mobility of people and goods. It is also a major transcontinental transportation corridor linking Southern California with the east coast; and carries high volumes of truck traffic transporting goods across the nation. The route also serves significant recreational trips to the Mojave Desert, Colorado River and Laughlin destinations.

The Federal Functional Classification (FFC) for the entire California portion of I-40 is Principal Arterial (PA). It is included in the Surface Transportation Assistance Act (STAA) national network for oversized Trucks. It is included in the Strategic Highway Corridor Network (STRAHNET) serving:

- The Fort Irwin Nation Training Center
- The Goldstone Deep Space Tracking Center
- The Marine Corps Logistic Base near Barstow
- The Marine Corps Air Ground Combat Center.

It is included in the International Road System (IRRS). The entire length within California has designations of "High Emphasis" and "Gateway".

3. PURPOSE AND NEED

Purpose:

The purpose of the proposed project is:

- To reduce the severity and the number of run-off-the-road accidents in the median. To improve the safety of the traveling public by re-grading the median cross slopes inside the clear recovery zone from existing 6:1 or steeper gradient to 10:1 or flatter.
- To improve the clear recovery zone.
- To improve the safety of motorists by providing a clear recovery zone area and upgrading the existing highway safety features within the clear recovery zone.

Need:

In its current condition, the proposed project limits between Essex Road Overcrossing (PM R100.0) and California/Arizona State Line (PM R154.6) near the City of Needles are in need of improvement due to non-standard median cross slopes. Flattening the existing median cross slope would improve the safety of the traveling public. This segment of I-40 has experienced several "overturn" accidents in recent years in the median.

To improve the safety of the traveling public in this segment of I-40, the District's Traffic Operations initiated this safety project under Project Initiation Proposal (PIP) No. 3702 (See Attachment I) to regrade the existing cross slope median. This project will be funded under the SHOPP Collision Severity Reduction Program (201.015).

4. DEFICIENCIES

In its current condition, this segment of I-40 is in need of improvement due to nonstandard median cross slopes. Flattening the median by regarding the cross slope would improve the safety of the travelling public on this segment of Interstate 40.

4A. Accident Data

Caltrans Traffic Accident Surveillance & Analysis System (TASAS) - Transportation System Network (TSN) Report, Table B - indicates the following accident summaries for the project segment during the three-year period of July 01, 2010 to June 30, 2013.

Table 1 - Summary of Accident Rates

From 07/01/2010 to 06/30/2013 (Per Million Vehicles Miles)

LOCATION I-40 PM R100.0/R154.6	ACTUAL RATES (per Million Vehicle Miles)			AVERAGE RATES (per Million Vehicle Miles)		
	F	F+I	TOTAL	F	F+I	TOTAL
Westbound (WB)	.0006	.11	.28	.011	.15	.35
Eastbound (EB)	.0006	.16	.34	.011	.15	.35

F = Fatal, F+I= Fatal plus Injury, Total= All reported accidents

As shown in Table-1, the actual accident fatal plus injury rate on I-40 in the EB direction within the project limits is slightly higher than the average rate for a similar type facility.

The summaries of Primary Collision Factors and Collision Types are shown in tables below.

Table 2 - Summary of Primary Collision Factors (Eastbound)

Primary Collision Factors										
HBD	FTC	FTY	IT	ESS	OV	ID	OTD	UNK	FA	NS
2.7	0.0	0.0	54.5	14.5	20.0	0.0	7.3	0.9	0.0	0.0

HBD = Influence of Alcohol
FTC = Following to Close
FTY = Failure to Yield
IT = Improper Turn
ESS = Speeding
OV = Other Violations
ID = Improper Driving
OTD = Other Than Driver
UNK = Unknown
FA = Fell Asleep
NS = Not Stated

As shown in Table 2, the leading collision factor was improper turn (54.5%) and other violations (20.0%) followed by speeding (14.5%), other than driver (7.3%), influence of alcohol (2.7%), and unknown (0.9%).

Table 3 - Summary of Type of Collisions (Eastbound)

Type of Collisions								
Head-On	Sideswipe	Rear-End	Broadside	Hit-Object	Overturn	Auto-Ped	Other	Not Stated
0.0	15.5	9.1	0.9	35.5	33.6	1.8	3.6	0.0

As shown in Table 3, the accident data for this segment shows the majority of the collision types were overturn (33.6%) and hit-object (35.5%) followed by sideswipe

(15.5%), rear-end (9.1%), broadside (0.9%) auto-ped (1.8%), and other (3.6%). The proposed improvement should improve the safety, and the number of overturn and hit-object accidents should be decreased by regrading the median cross slope.

Table 4 - Summary of Primary Collision Factors (Westbound)

Primary Collision Factors										
HBD	**FTC**	**FTY**	**IT**	**ESS**	**OV**	**ID**	**OTD**	**UNK**	**FA**	**NS**
5.4	0.0	0.0	42.4	13.0	26.1	0.0	10.9	2.2	0.0	0.0

HBD = Influence of Alcohol
FTC = Following to Close
FTY = Failure to Yield
IT = Improper Turn
ESS = Speeding
OV = Other Violations
ID = Improper Driving
OTD = Other Than Driver
UNK = Unknown
FA = Fell Asleep
NS = Not Stated

As shown in Table 4, the leading collision factor was improper turn (42.4%) and other violations (26.1%) followed by speeding (14.5%), other than driver (10.9%), influence of alcohol (5.4%), and unknown (2.2%).

Table 5 - Summary of Type of Collisions (Westbound)

Type of Collisions								
Head-On	**Sideswipe**	**Rear-End**	**Broadside**	**Hit-Object**	**Overturn**	**Auto-Ped**	**Other**	**Not Stated**
0.0	17.4	13.0	2.2	30.4	30.4	1.1	5.4	0.0

As shown in Table 5, the accident data for this segment shows the majority of the collision type were overturn (30.4%) and hit-object (30.4%) followed by sideswipe (17.4%), rear-end (13.0%), broadside (2.2%), auto-ped (1.1%), and other (5.4%). The proposed improvement should improve the safety, and the number of overturn and hit-object should be decreased by re-grading the cross slope median.

4B. Traffic Volume

The table below shows the traffic forecast on I-40, within the project limits, for the current year (2015), opening year (2019) and future year (2039).

Table 6 - Traffic Data – Segment 1 (PM R100/R125)

Traffic Data	**2015 (Existing)**	**2019 (Opening)**	**2029 (10 Year)**	**Year 2039 (20 Year)**
Annual Average Daily Traffic (ADT)	11,300	13,700	21,900	31,100
Design Hour Volume (DHV)	1,450	1,590	1,990	2,430
Directional Split (D/S)	50%	50%	50%	50%
Trucks % in ADT	60%	60%	60%	60%
Truck % in DHV	40%	40%	40%	40%

Table 7 - Traffic Data – Segment 2 (PM R125/154.64)

Traffic Data	2015 (Existing)	2019 (Opening)	2029 (10 Year)	Year 2039 (20 Year)
Annual Average Daily Traffic (ADT)	13,200	15,800	24,900	34,800
Design Hour Volume (DHV)	1,340	1,490	1,960	2,460
Directional Split (D/S)	50%	50%	50%	50%
Trucks % in ADT	60%	60%	60%	60%
Truck % in DHV	40%	40%	40%	40%

5. CORRIDOR AND SYSTEM COORDINATION

This project is consistent with the Caltrans' 2012 Transportation Concept Report (TCR) which is a 20-year planning document that evaluates current and projected conditions along the route and communicates the vision for its development. Interstate 40 (I-40) is expected to continue as a four-lane freeway with no significant impacts from growth or development projected in the rural areas of San Bernardino County or the cities of Barstow and Needles. No capacity improvements are planned or recommended for this corridor.

6. ALTERNATIVES

6A. Alternative 1: No Build

The No-Build alternative would maintain the facility in its current condition. No improvements would be implemented at this time; therefore, no capital cost is associated with this alternative. The No-Build alternative would not address or alleviate the identified safety issues along this segment of I-40. This alternative would not satisfy the need and purpose.

6B. Alternative 2: Re-grade the median cross slope

As previously stated, due to the lengthy project limits and complexities of the Environmental Documents, this project is divided in two (2) segments. The currently planned segments are as follows:

Segment	EA	Location
1	0R141	PM 100.0/125.0
2	0R142	PM 125.0/154.6

This proposed alternative improvement consists of re-grading the median cross slopes from existing which vary from 2:1 to 6:1 or steeper to 10:1 or flatter on Interstate 40 (I-40) from Essex Road Overcrossing (PM 100.0) to California/Arizona State Line (PM 154.6) near the City of Needles, in the County of San Bernardino. There are segments within the project limits where the median cross slope is too steep to allow traffic traveling to have a safe traversable and/or recoverable transition back to the highway. Current advisory standards for the median cross slopes require a gradient of 10:1 or flatter slope; 20:1 being preferred.

As previously indicated, the proposed improvements are expected to improve recovery zones and reduce the risk of "overturn" accidents in the median. No additional right of way is required for this alternative. The proposed improvements would require substantial fill material and modification of existing drainage facilities within the median. Drainage modifications and improvement work will consist of reconstruction of existing off-site drainage facilities by extending the storm drain in the median. The cost of the proposed improvements in this alternative is estimated at $ 66,412,000 including support costs. The cost estimate breakdown is as follows:

Roadway	$ 39,000,000
Structure	$ 0
R/W	$ 10,012,000
Total Capital Cost	$ 49,012,000
Total Support Cost	$ 17,400,000
Total Project Cost	$ 66,412,000

The Total cost breakdown for each segment is as follows:

Segment	***EA***	***Construction Cost***	***R/W Cost***	***Support Cost***	***Total***
1	*0R141K*	*$22,000,000*	*$5,006,000*	*$9,200,000*	*$36,206,000*
2	*0R142K*	*$17,000,000*	*$5,006,000*	*$8,200,000*	*$30,206,000*
Total		***$ 39,000,000***	***$10,012,000***	***$17,400,000***	***$66,412,000***

Transportation Management Plan (TMP)

A Traffic Management Plan (TMP) Data Sheet will be developed during Project Approval & Environmental Document (PA/ED) and Plans, Specifications, and Estimates (PS&E) phases of this project.

Right of Way

The proposed work is in the median and there is no need for new Right of Way.

Storm Water BMPs

A short form Storm Water Data Report has been prepared for this project (See Attachment E).

Hazardous Materials

An Initial Site Assessment (ISA) Checklist was prepared on May 14, 2014. The project was determined to have a low risk for potential hazardous waste involvement (See Attachment H).

7. COMMUNITY INVOLVEMENT

General public involvement will occur during the review process included in the development of the Environmental Document. It is anticipated that multiple opportunities will be provided where public input will be received and addressed on the alternative under consideration at that time.

8. ENVIRONMENTAL DETERMINATION/DOCUMENT

Based on the initial information provided for preliminary evaluation of the proposed project, it has been determined that an Initial Study (IS) would be the appropriate environmental documentation for CEQA compliance for this proposed project. The IS would be prepared in accordance with Caltrans' environmental procedures, as well as State environmental regulations. Following the public circulation period, all comments shall be considered, and the Project Development Team shall identify a Preferred Alternative. Caltrans proposes to issue a Negative Declaration (ND) or Mitigated ND in conjunction with approving the Initial Study.

Regarding documentation of NEPA compliance, based on the scope of work proposed, the location of the project, and the results of the Technical Studies performed, Caltrans determined that an Environmental Assessment (EA) would be the appropriate environmental documentation for NEPA compliance for the proposed project. The EA would be prepared in accordance with Caltrans' environmental procedures and federal environmental regulations. Following the public circulation period, all comments shall be considered and the Project Development Team shall identify a Preferred Alternative. In accordance with NEPA. Caltrans proposes to issue a Finding of no Significant Impacts (FONSI) in conjunction with approving the Environmental Assessment.

If the scope of work (including utility relocation requirements—if any) or limits for the proposed project changes prior to completion of the preliminary engineering (PA&ED phase), additional Technical Studies may be required, and/or the type of documentation for CEQA compliance and NEPA compliance required for the proposed project will be further evaluated by Caltrans and may be changed as a result.

If during the final design (PS&E phase), or during the construction phase, the scope of work (including utility relocation requirements—if any) or limits for the proposed project changes, performance of an Environmental Re-Evaluation will be required to confirm if

the environmental documentation for CEQA compliance and NEPA compliance documentation remains complete. New or revised Technical Studies will be prepared if needed. An Environmental Certification will be required at the end of the PS&E phase, and a Certificate of Compliance (CEC) will be required following completion of construction of the project.

9. FUNDING/PROGRAMMING

The two projects, EA 0R141 and 0R142 are proposed for programming into the 2016 SHOPP as long lead projects and funded from 20.XX.201.015 Collision Severity Reduction Program. It has been determined that the projects are eligible for federal aid funding.

Capital Outlay Support and Project Estimates:

9A. Segment 1-EA 0R141 (PM 100/125)

Fund Source	**Fiscal Year Estimate**							
20.XX.201.015	Prior	2017/18	2018/9	2019/20	2020/21		Future	Total
Component	**In thousands of dollars ($1,000)**							
PA&ED Support					3,200			
PS&E Support					2,500			
Right-of-Way Support					200			
Construction Support					3,300			
Right-of-Way Capital					5,006			
Construction Capital					22,000			
Total					36,206			

9B. Segment 2-EA 0R142 (PM 125/154.64)

Fund Source	**Fiscal Year Estimate**							
20.XX.201.015	Prior	2019/20	2020/21	2021/22	2022/23		Future	Total
Component	**In thousands of dollars ($1,000)**							
PA&ED Support					2,900			
PS&E Support					2,300			
Right-of-Way Support					200			
Construction Support					2,800			
Right-of-Way Capital					5,006			

Construction Capital					17,000			
Total					30,206			

10. SCHEDULE

10A. Segment 1-0R141 (PM 100.0/125.0):

Deliverables	Task Number	Start Date	Finish Date
Environmental Study Request	160.30	10/02/2017	12/29/2017
Base Maps and Plan Sheets for PA&ED Development	160.45	09/30/2016	09/29/2017
Draft Environmental Document	165.25	01/02/2018	06/31/2019
DED Circulation	175.05	06/07/2019	07/08/2019
Project Preferred Alternative	175.20	07/09/2019	09/02/2019
Final Environmental Document	180.10	07/09/2019	09/30/2019

Milestones	Milestone No.	Date
Begin Environmental	M020	01/02/2018
Notice of Preparation (EIR, ND & FONSI only)	M030	01/15/2018
Notice of Intent (EIR, ND & FONSI only)	M035	01/15/2018
Circulate DPR and DED Internally in District	M060	02/01/2019
Circulate DPR and DED Externally	M120	06/07/2019
Approved FED	M160	09/30/2019
PA&ED	M200	09/30/2019
PS&E To DOE	M377	08/31/2020
R/W Cert	M410	01/29/2021
RTL	M460	02/26/2021
CCA	M600	07/31/2023
End Project	M800	07/31/2025

10B. Segment 2-EA 0R142 (PM 125.0/154.6):

Deliverables	Task Number	Start Date	Finish Date
Environmental Study Request	160.30	03/30/2018	05/25/2018
Base Maps and Plan Sheets for PA&ED Development	160.45	09/30/2016	03/29/2018
Draft Environmental Document	165.25	05/31/2018	04/29/2020
DED Circulation	175.05	04/30/2020	08/07/2020
Project Preferred Alternative	175.20	06/02/2020	08/21/2020
Final Environmental Document	180.10	06/02/2020	08/21/2020

Milestones	Milestone No.	Date
Begin Environmental	M020	05/31/2018
Notice of Preparation (EIR, ND & FONSI only)	M030	06/15/2018
Notice of Intent (EIR, ND & FONSI only)	M035	06/15/2018
Circulate DPR and DED Internally in District	M060	01/02/2020
Circulate DPR and DED Externally	M120	04/30/2020
Approved FED	M160	08/21/2020
PA&ED	M200	08/31/2020
PS&E To DOE	M377	02/28/2022
R/W Cert	M410	07/29/2022
RTL	M460	08/31/2022
CCA	M600	01/31/2025
End Project	M800	01/29/2027

11. RISKS

Risks that impact schedule and cost are mainly attributed to Environmental and Right of Way activities. The timeline identified in the report will need to be further evaluated during PA&ED. See Risk Assessment, Attachment C for additional information.

12. FHWA COORDINATION

Per the current Joint Stewardship and Oversight Agreement (Agreement) between the California Department of Transportation (Caltrans) and Federal Highway Administration (FHWA), dated May 28, 2015, this project is considered to be an Assigned Project. However, should any future situation/circumstance that will potentially classify the project as a High Profile Project arises, Caltrans shall notify FHWA and reassess this project using the Project of Division Interest selection criteria outlined in the Agreement.

13. PROJECT REVIEWS

Scoping team field review Don Bao, Matthew Maestas Date 03/10/2015

Headquarters Design Coordinator Luis Betancourt Date 6/10/2015

Project Manager Rafih Achy Date 6/05/2015

D8 SHOPP Manager Joe Fehrenkamp Date 6/11/2015

FHWA Liaison Anthony Ng Date 6/10/2015

District Safety Review Kevin Chen Date 6/10/2015

Environmental Review Aaron Burton Date 6/05/2015

Operation Review Haissam Yahya Date 6/25/2015

14. PROJECT PERSONNEL

NAME	Title & Branch	Phone Number
Rafih Achy	Project Manager	(909) 383-4077
Haissam Yahya	Office Chief, Traffic Operations	(909) 383-4065
Matthew Maestas	Office Chief, Planning	(909) 383-4825
Aaron Burton	Senior Environmental Planner	(909)-383-5918
David Chavez	Office Chief, Right of Way Planning and Management	(909) 888-7153
Don Bao	Project Engineer	(909) 806-3950
Virgal Woolfolk	Generalist	(909) 383-1593

15. ATTACHMENTS

A. Preliminary Cost Estimate
B. Layout and Typical Cross Section
C. Risk Assessment
D. Right of Way Data Sheet
E. Storm Water Data Report
F. Project Category Assignment
G. Preliminary Environmental Analysis Report (PEAR)
H. Initial Site Assessment (ISA) Checklist
I. Project Initiation Proposal (PIP)

ATTACHMENT A

PRELIMINARY COST ESTIMATE

PRELIMINARY
PROJECT COST ESTIMATE SUMMARY

TYPE OF ESTIMATE : PROJECT STUDY REPORT

SBd-40-PM R100/R125
08-804-EA 0R140K-1-0812000024

PROGRAM CODE: 201.010/HB1

PIP NUMBER:

PROJECT DESCRIPTION : It is proposed to regade existing median slopes to 10:1 or flatter at various locations along Interstate 40.

LIMITS : From Essex Road (PM R100.00) to __ (PM R125)

PROPOSED IMPROVEMENTS :

ROADWAY ITEMS		$22,000,000
STRUCTURE ITEMS		$0
SUBTOTAL CONSTRUCTION		$22,000,000
RIGHT OF WAY	(Current Value)	$5,006,000
SUBTOTAL PROJECT COST		$27,006,000
TOTAL PROJECT COST		**$27,006,000**
ROUND OFF TO:		**$27,010,000**

Prepared By:
Project Engineer Don Bao Date: April 22, 2015

Reviewed By
District Program Manager Date:

Approved By
Project Manager Date:

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

SBd-40-PM R100/R125
08-804-EA 0R140K-1-0812000024

I. ROADWAY ITEMS	QUANTITY	UNIT	UNIT PRICE	UNIT COST	SECTION COST
SECTION 1. Earthwork					
Roadway Excavation	75,000	Yd^3	$10	$750,000	
Imported Borrow	892,380	Yd^3	$10	$8,923,800	
Develop Water Supply	1	LS	$60,000	$60,000	
Clearing & Grubbing	1	LS	$250,000	$250,000	
			Total Earthwork Section		**$9,983,800**
SECTION 2. Structural Section					
Minor Concrete (Curb)	0	CY	$425	$0	
Minor Concrete (stamped concrete)	0	SQFT	$6	$0	
Hot Mix Asphalt (Type A)	0	TON	$90	$0	
Rubberized Hot Mix Asphalt (Gap-Graded)	0 0	TON	$92	$0	
Aggregate Base Class 2	0	CY	$30	$0	
Remove Asphalt Concrete surfacing	0	SQYD	$6	$0	
			Total Structural Section		**$0**
SECTION 3. Drainage					
Project Drainage	1	LS	$2,000,000	$2,000,000	
			Total Drainage Section		**$2,000,000**

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

SBd-40-PM R100/R125
08-804-EA 0R140K-1-0812000024

	QUANTITY	UNIT	UNIT PRICE	UNIT COST	SECTION COST
SECTION 4. Specialty Items					
Temporary Construction BMPs (1.5%)	1	LS	$400,000	$400,000	
Environmental Mitigation	1	LS		$0	
Resident Engineer Office Space.	1	LS	$132,000	$132,000	
Metal Beam Guard Rail	4000	LF	$40	$160,000	
			Total Specialty Items		**$692,000**
SECTION 5. Traffic Items					
Construction Area Signs	1	LS	4,800.00	$2,400.00	
Traffic Control System	1	LS	1,900,000	$1,080,000	
Portable Changeable Message Sign	4	EA	4,000.00	$8,000.00	
Traffic Management Plan	1	LS	$1,200,000	$1,200,000	
			Total Traffic Items		**$2,290,400**
			SUBTOTAL SECTIONS 1-5		**$14,966,200**

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

SBd-40-PM R100/R125
08-804-EA 0R140K-1-0812000024

					UNIT COST	SECTION COST
SECTION 6. Minor Items						
Subtotal Sections 1-5		$14,966,200	x	5%	$748,310	
			TOTAL MINOR ITEMS			$748,310
SECTION 7. Roadway Mobilization						
Subtotal Sections 1-5		$14,966,200				
Minor Items		$748,310				
	SUM	$15,714,510	x	10%	$1,571,451	
			TOTAL ROADWAY MOBILIZATION			$1,571,451
SECTION 8. Roadway Additions						
Supplemental						
Subtotal Sections 1-5		$14,966,200				
Minor Items		$748,310				
	SUM	$15,714,510	x	5%	$785,726	
Contingencies						
Subtotal Sections 1-5		$14,966,200				
Minor Items		$748,310				
	SUM	$15,714,510	x	25%	$3,928,628	
			TOTAL ROADWAY ADDITIONALS			**$4,714,353**
			TOTAL ROADWAY ITEMS **(Total of Sections 1-8)**			$22,000,314
			ROUND OFF TO :			**$22,000,000**

Estimate Prepared By : Don Bao **Phone #** _____
Date _____

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

SBd-40-PM R100/R125
08-804-EA 0R140K-1-0812000024

II. STRUCTURES ITEMS

The estimated contruction costs included 10% time related overhead, 10% mobilization and 25% contingencies.

Bridge Name	Bridge No.	Scope	Type	Cost

TOTAL COST FOR STRUCTURE $0

TOTAL STRUCTURES ITEMS $0

ROUND OFF TO : $0

Estimate Prepared By : Don Bao Phone # ____

Date _____

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

SBd-40-PM R100/R125
08-804-EA 0R140K-1-0812000024

III. RIGHT OF WAY

Right of Way estimates should consider the probable highest and best use and type and intent of improvements at the time of acquisition. Assume acquisition including utility relocation occurs at the right of way certification milestone as shown in the Funding and Scheduling Section of the PSR. For further guidance see Chapter I, Caltrans, Right of Way Procedural Handbook.

	Current Value	Escalated Rate	Escalated Value
Acquisition, including Excess Lands, Damages and Goodwill	$5,000,000		$5,000,000
Utility Relocation (State share)	$1,000		$1,000
Clearance/Demolition			
Project Permit Fees	$5,000		$5,000
Title and Escrow Fees	$0		$0
Condemnation Costs	$0		$0
TOTAL RIGHT OF WAY (CURRENT VALUE) :	**$5,006,000**		
TOTAL ESCALATED VALUE :			**$5,006,000**

ROUND OFF TO :	**$5,006,000**

Estimate Prepared By : Don Bao **Phone #** _

Date _____

PRELIMINARY
PROJECT COST ESTIMATE SUMMARY

TYPE OF ESTIMATE : PROJECT STUDY REPORT

SBd-40-PM 125/154.64
08-804-EA 0R140K-0812000024
Segment 2

PROGRAM CODE: 201.010/HB1

PIP NUMBER:

PROJECT DESCRIPTION : It is proposed to regade existing median slopes to 10:1 or flatter at various locations along Interstate 40.

LIMITS : From PM 125 to Arizona State Line (PM 154.64)

PROPOSED IMPROVEMENTS :

ROADWAY ITEMS		$17,000,000
STRUCTURE ITEMS		$0
SUBTOTAL CONSTRUCTION		$17,000,000
RIGHT OF WAY	(Current Value)	$5,006,000
SUBTOTAL PROJECT COST		$22,006,000
TOTAL PROJECT COST		**$22,006,000**
ROUND OFF TO:		**$22,010,000**

Prepared By:
Project Engineer Don Bao Date: June 24, 2015

Reviewed By
District Program Manager Date:

Approved By
Project Manager Date:

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

SBd-40-PM 125/154.64
08-804-EA 0R140K-0812000024

I. ROADWAY ITEMS	QUANTITY	UNIT	UNIT PRICE	UNIT COST	SECTION COST
SECTION 1. Earthwork					
Roadway Excavation	65,850	Yd^3	$10	$658,500	
Imported Borrow	597,070	Yd^3	$10	$5,970,700	
Develop Water Supply	1	LS	$60,000	$60,000	
Clearing & Grubbing	1	LS	$250,000	$250,000	
			Total Earthwork Section		**$6,939,200**
SECTION 2. Structural Section					
Minor Concrete (Curb)	0	CY	$425	$0	
Minor Concrete (stamped concrete)	0	SQFT	$6	$0	
Hot Mix Asphalt (Type A)	0	TON	$90	$0	
Rubberized Hot Mix Asphalt (Gap-Graded)	0 0	TON	$92	$0	
Aggregate Base Class 2	0	CY	$30	$0	
Remove Asphalt Concrete surfacing	0	SQYD	$6	$0	
			Total Structural Section		**$0**
SECTION 3. Drainage					
Project Drainage	1	LS	$2,000,000	$2,000,000	
			Total Drainage Section		**$2,000,000**

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

SBd-40-PM 125/154.64
08-804-EA 0R140K-0812000024

	QUANTITY	UNIT	UNIT PRICE	UNIT COST	SECTION COST
SECTION 4. Specialty Items					
Temporary Construction BMPs (1.5%)	1	LS	$725,000	$725,000	
Environmental Mitigation	1	LS		$0	
Resident Engineer Office Space.	1	LS	$132,000	$132,000	
Metal Beam Guard Rail	6500	LF	$40	$260,000	
			Total Specialty Items		**$1,117,000**
SECTION 5. Traffic Items					
Construction Area Signs	1	LS	4,800.00	$2,400.00	
Traffic Control System	1	LS	1,900,000	$700,000	
Portable Changeable Message Sign	4	EA	4,000.00	$6,000.00	
Traffic Management Plan	1	LS	$800,000	$800,000	
			Total Traffic Items		**$1,508,400**
			SUBTOTAL SECTIONS 1-5		**$11,564,600**

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

SBd-40-PM 125/154.64
08-804-EA 0R140K-0812000024

					UNIT COST	SECTION COST
SECTION 6. Minor Items						
Subtotal Sections 1-5		$11,564,600	x	5%	$578,230	
			TOTAL MINOR ITEMS			$578,230
SECTION 7. Roadway Mobilization						
Subtotal Sections 1-5		$11,564,600				
Minor Items		$578,230				
	SUM	$12,142,830	x	10%	$1,214,283	
			TOTAL ROADWAY MOBILIZATION			$1,214,283
SECTION 8. Roadway Additions						
Supplemental						
Subtotal Sections 1-5		$11,564,600				
Minor Items		$578,230				
	SUM	$12,142,830	x	5%	$607,142	
Contingencies						
Subtotal Sections 1-5		$11,564,600				
Minor Items		$578,230				
	SUM	$12,142,830	x	25%	$3,035,708	
			TOTAL ROADWAY ADDITIONALS			**$3,642,849**
			TOTAL ROADWAY ITEMS **(Total of Sections 1-8)**			$16,999,962
			ROUND OFF TO :			**$17,000,000**

Estimate Prepared By : Don Bao **Phone #** _
Date _____

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

SBd-40-PM 125/154.64
08-804-EA 0R140K-0812000024

II. STRUCTURES ITEMS

The estimated contruction costs included 10% time related overhead, 10% mobilization and 25% contingencies.

Bridge Name	Bridge No.	Scope	Type	Cost

TOTAL COST FOR STRUCTURE $0

TOTAL STRUCTURES ITEMS $0

ROUND OFF TO : **$0**

Estimate Prepared By : Don Bao **Phone #** ____

Date _____

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

SBd-40-PM 125/154.64
08-804-EA 0R140K-0812000024

III. RIGHT OF WAY

Right of Way estimates should consider the probable highest and best use and type and intent of improvements at the time of acquisition. Assume acquisition including utility relocation occurs at the right of way certification milestone as shown in the Funding and Scheduling Section of the PSR. For further guidance see Chapter I, Caltrans, Right of Way Procedural Handbook.

	Current Value	Escalated Rate	Escalated Value
Acquisition, including Excess Lands, Damages and Goodwill	$5,000,000		$5,000,000
Utility Relocation (State share)	$1,000		$1,000
Clearance/Demolition			
Project Permit Fees	$5,000		$5,000
Title and Escrow Fees	$0		$0
Condemnation Costs	$0		$0
TOTAL RIGHT OF WAY (CURRENT VALUE) :	**$5,006,000**		
TOTAL ESCALATED VALUE :			**$5,006,000**

ROUND OFF TO :	**$5,006,000**

Estimate Prepared By : Don Bao **Phone # _**

Date _____

ATTACHMENT B

LAYOUTS & TYPICAL CROSS SECTION

INDEX OF PLANS

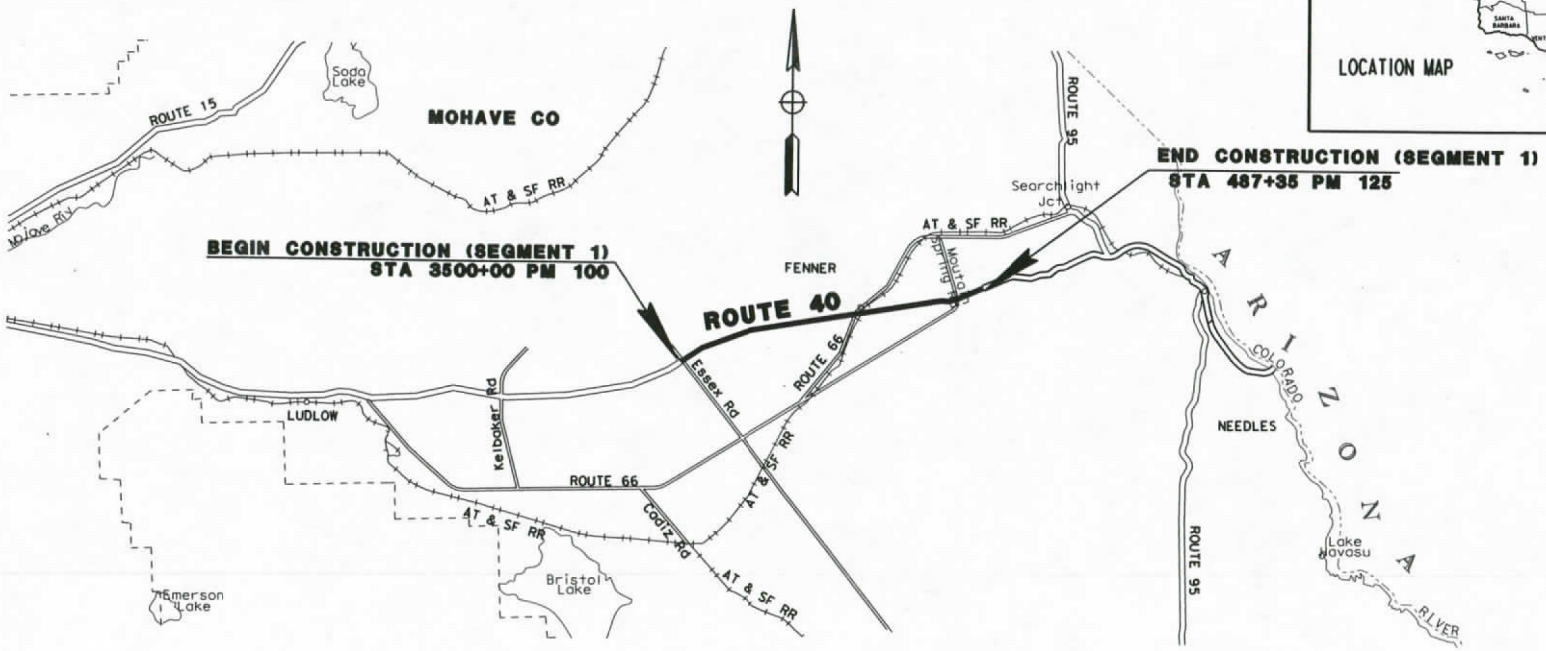
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN SAN BERNARDINO COUNTY
FROM ESSEX ROAD OVERCROSSING
TO 5 mile EAST ROUTE 95 SEPARATION BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	40	R100 / 154.64	1	19



NO SCALE

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

CONTRACT No.	00-000000
PROJECT ID	0812000024

PROJECT MANAGER

DESIGN ENGINEER

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

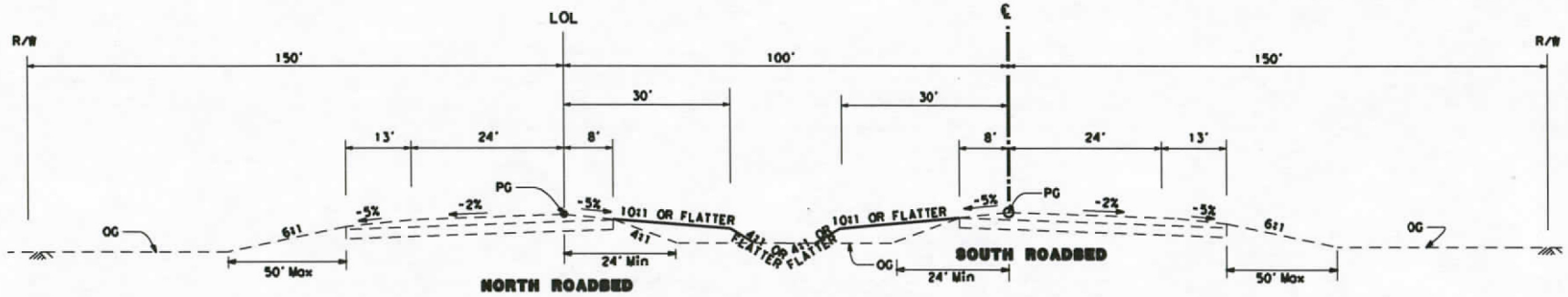
Dist	County	Route	Post Miles Total Project	Sheet No.	Total Sheets
08	SBd	40	100/154.64	2	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

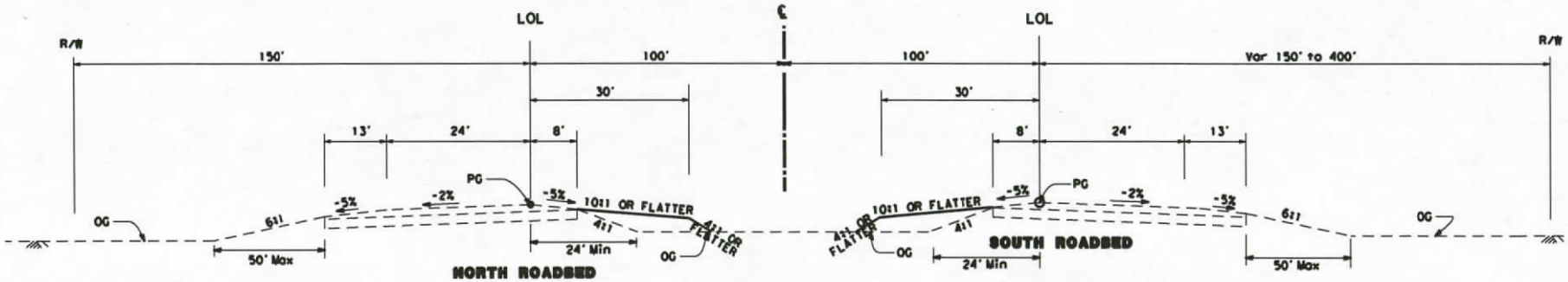
REGISTERED PROFESSIONAL ENGINEER CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



STA 3510+00 TO 4287+10
PM 115 TO PM 125

ROUTE 40



STA 3510+00 TO 4287+10
PM 100 TO PM 115

ROUTE 40

SEGMENT 1

TYPICAL CROSS SECTIONS

NO SCALE **X-2**

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

BORDER LAST REVISED 7/2/2010 | USERNAME => %USER DGN FILE => %REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 269 | PROJECT NUMBER & PHASE 0812000024-0R141

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	3	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — No. — CIVIL — STATE OF CALIFORNIA

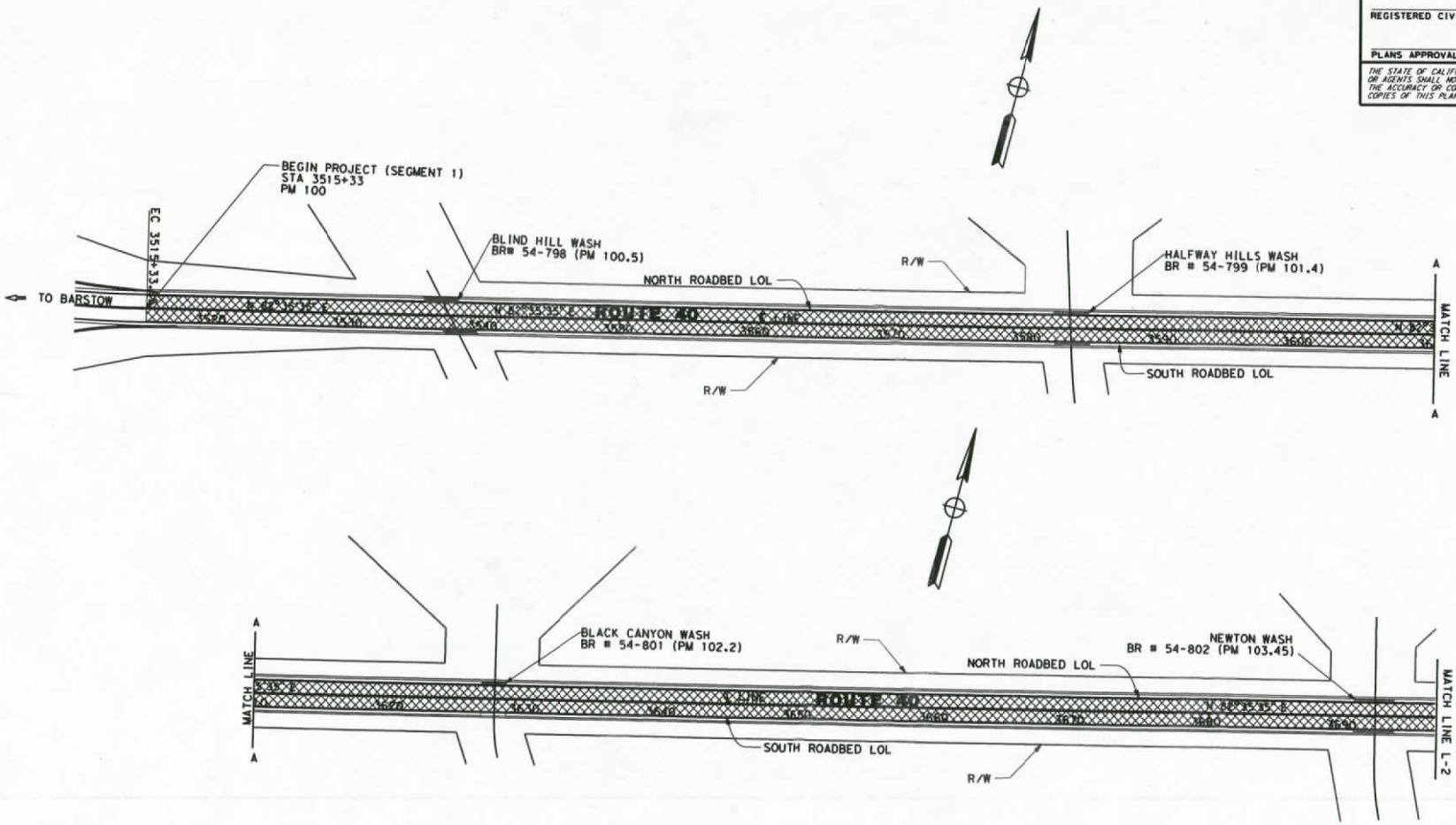
REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans



SEGMENT 1
LAYOUT
L-1

SCALE 1" = 400'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	4	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

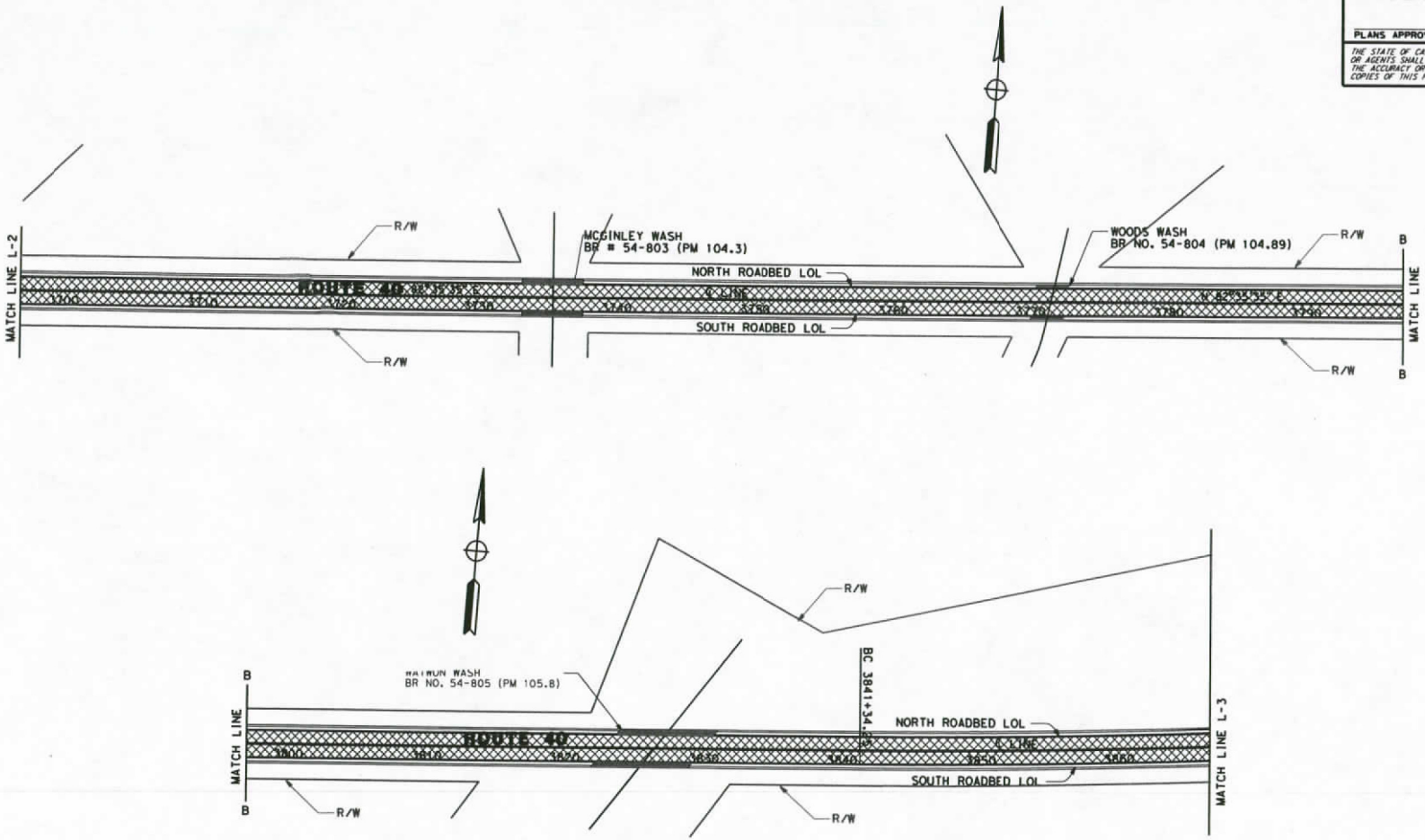
REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans



SEGMENT 1

LAYOUT

SCALE 1" = 400'

L-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	5	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

CURVE DATA

No. ⊙	R	Δ	T	L
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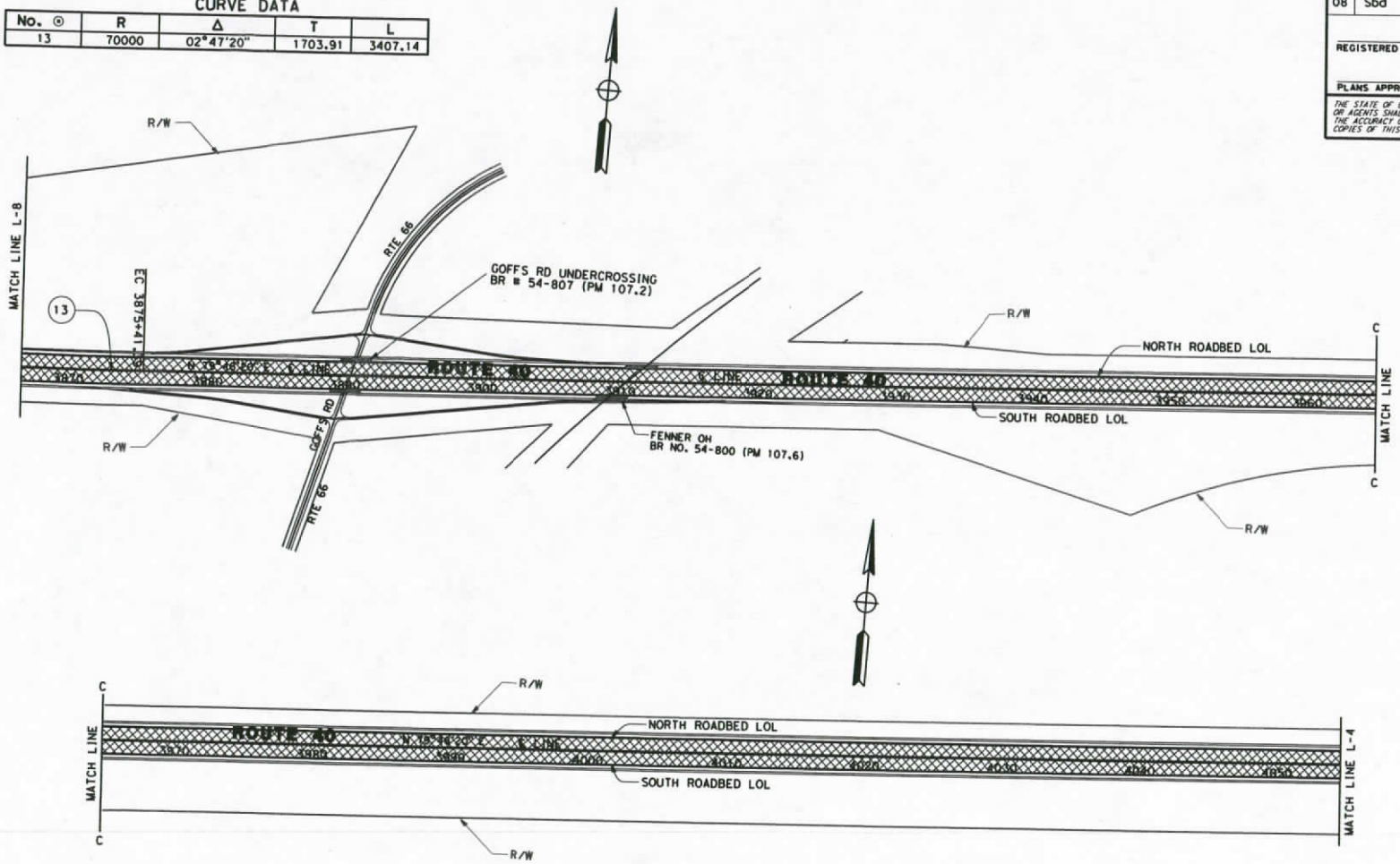


SCALE 1" = 400'

SEGMENT 1

LAYOUT

L-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	6	19

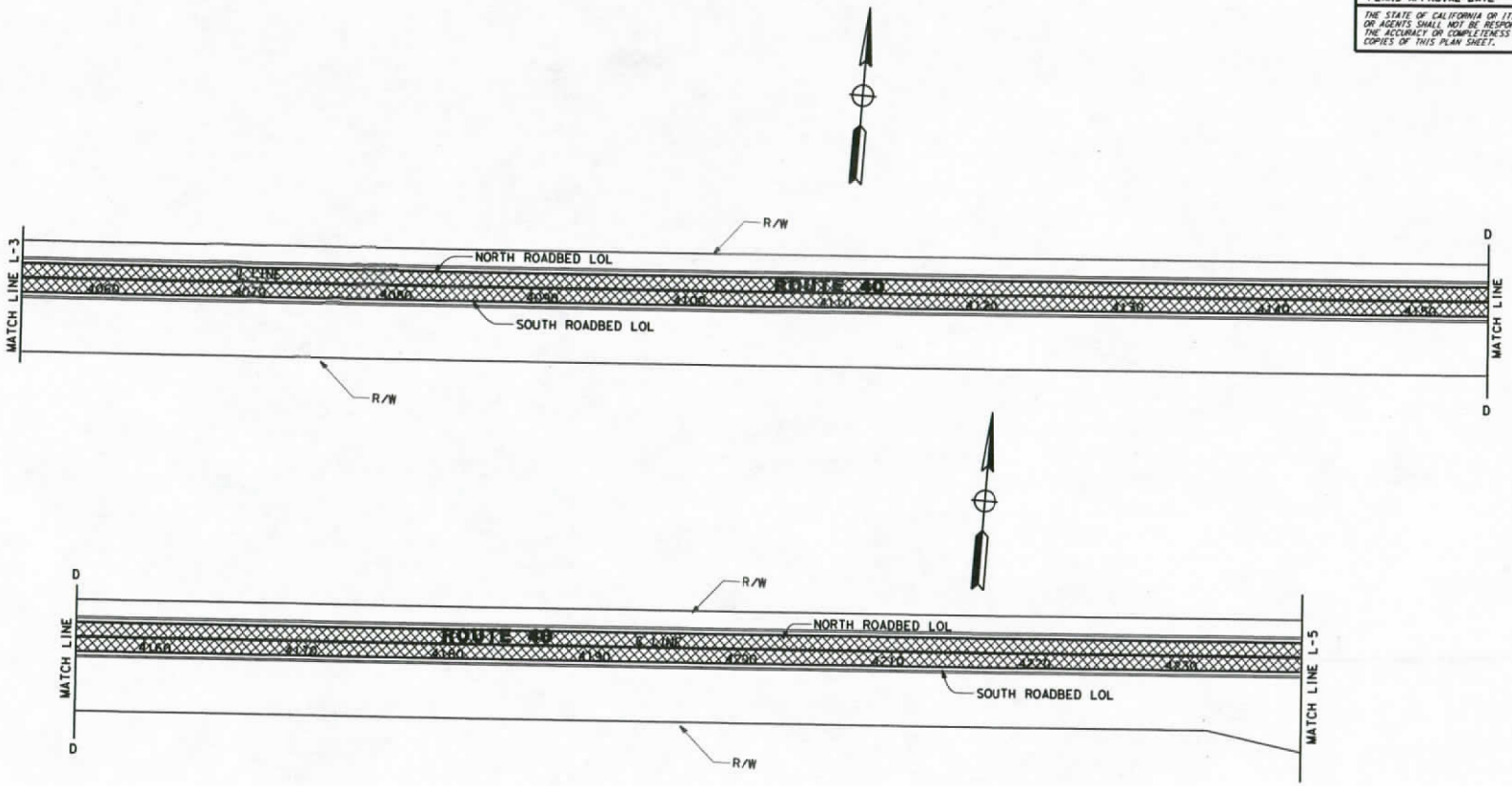
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

13



SEGMENT 1
LAYOUT
L-4

SCALE 1" = 400'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	7	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — No. — CIVIL — STATE OF CALIFORNIA

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CURVE DATA

No. ⊙	R	Δ	T	L
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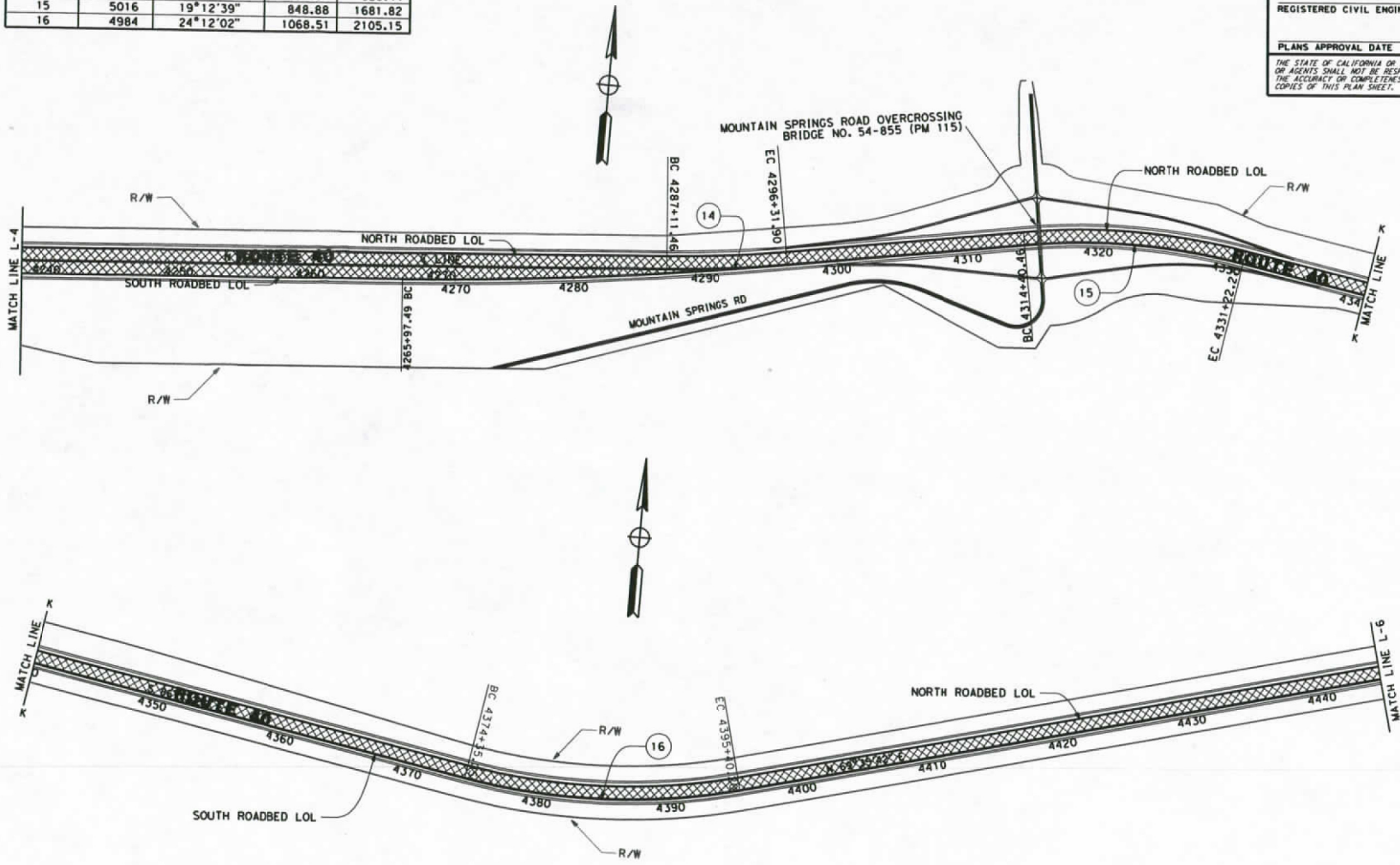


SCALE 1" = 400'

SEGMENT 1

LAYOUT

L-5

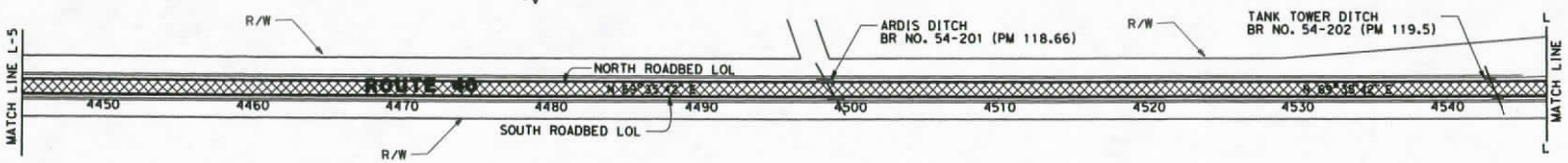
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	8	19

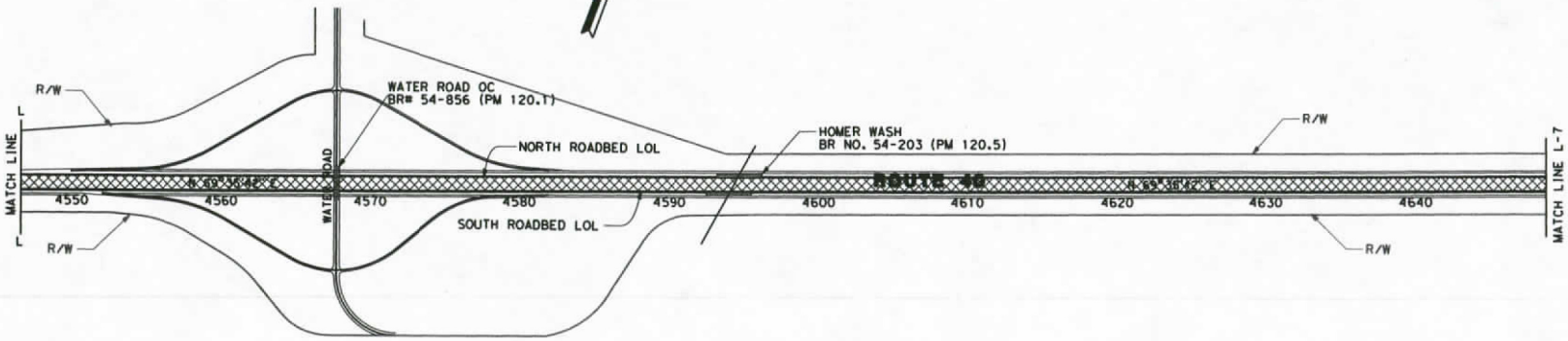
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA





SEGMENT 1

LAYOUT

L-6

SCALE 1" = 400'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	9	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

CURVE DATA

No. ⊙	R	Δ	T	L
17	5000	25°58'36"	1153.27	2266.89
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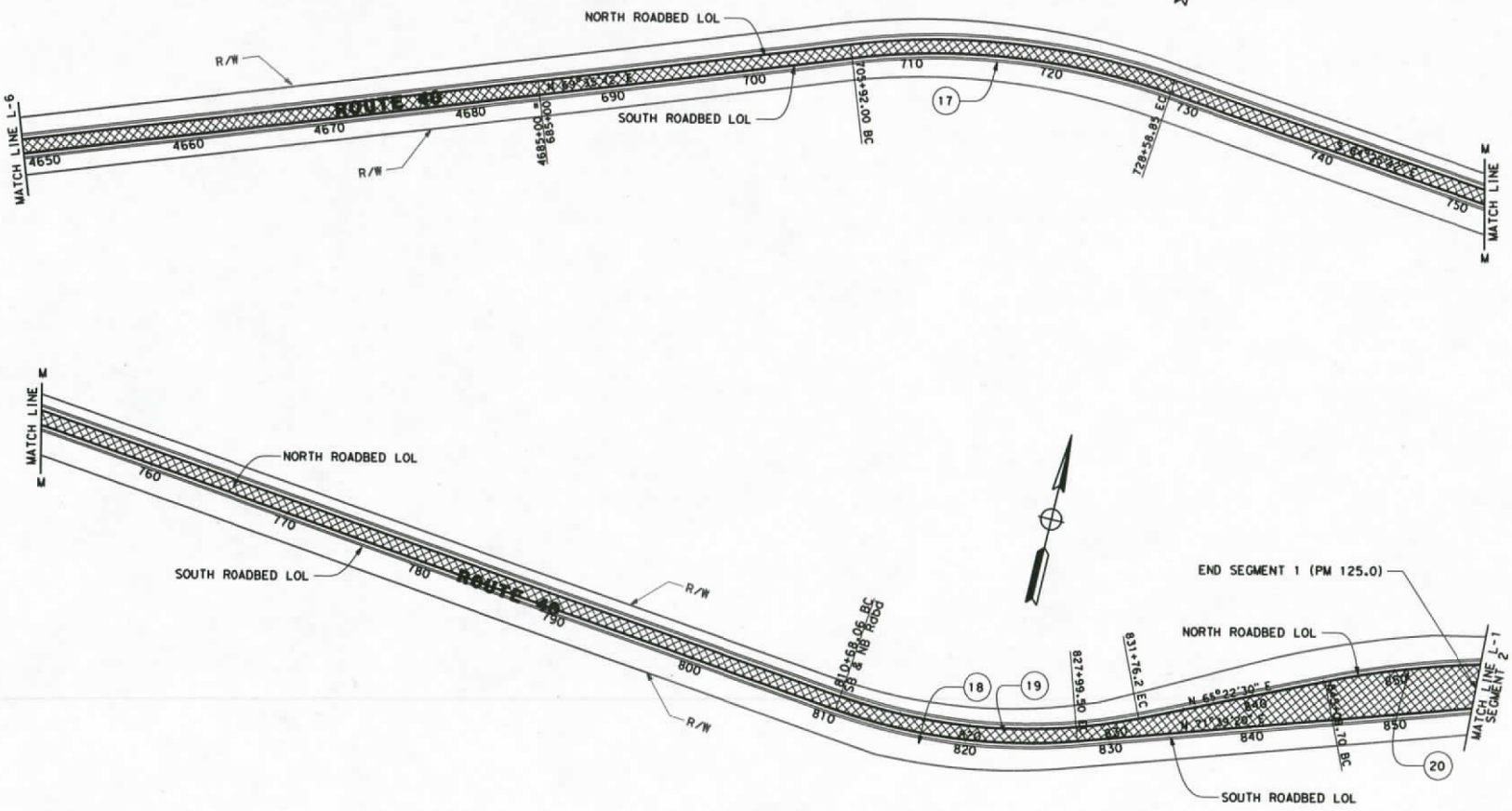
20	6500	21°18'51"	1223.15	2418.02



SEGMENT 1

LAYOUT

L-7

SCALE 1" = 400'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

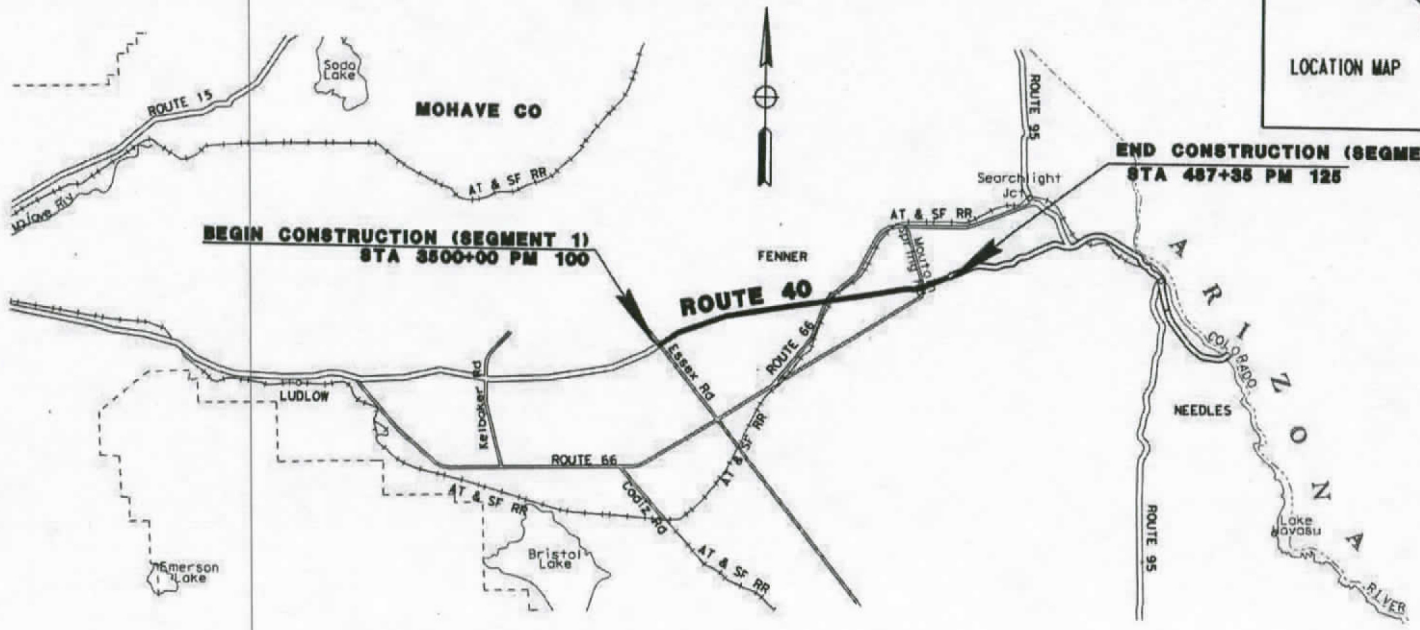
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN SAN BERNARDINO COUNTY
FROM ESSEX ROAD OVERCROSSING
TO 5 mile EAST ROUTE 95 SEPARATION BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	40	R100 / 154.64	1	19

LOCATION MAP



NO SCALE

PROJECT ENGINEER
REGISTERED CIVIL ENGINEER
DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA

PROJECT MANAGER

DESIGN ENGINEER

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

CONTRACT No.	00-000000
PROJECT ID	0812000024

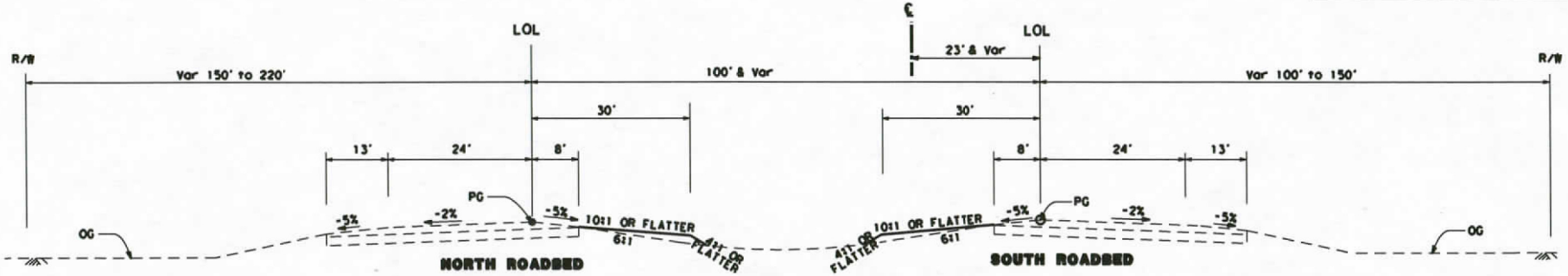
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	40	100/155	11	19

REGISTERED CIVIL ENGINEER DATE

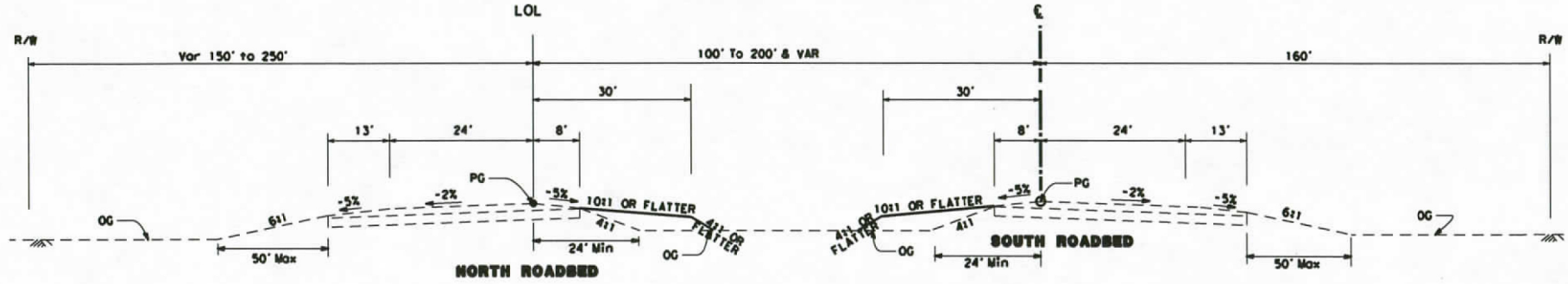
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA



PM 135 TO PM 154.64



STA 3510+00 TO 1430+00
PM 125 TO PM 135

ROUTE 40

SEGMENT 2
TYPICAL CROSS SECTIONS

NO SCALE

X-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

FUNCTIONAL SUPERVISOR

BORDER LAST REVISED 7/2/2010

USERNAME => USER
DGN FILE => REQUEST

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 269

PROJECT NUMBER & PHASE 0812000024-0R142

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	12	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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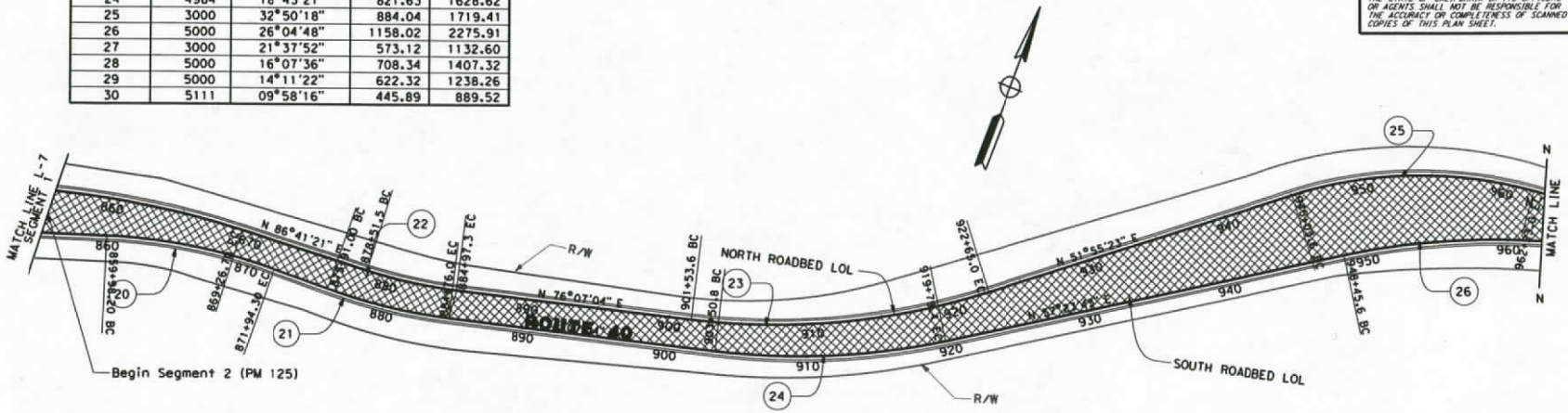
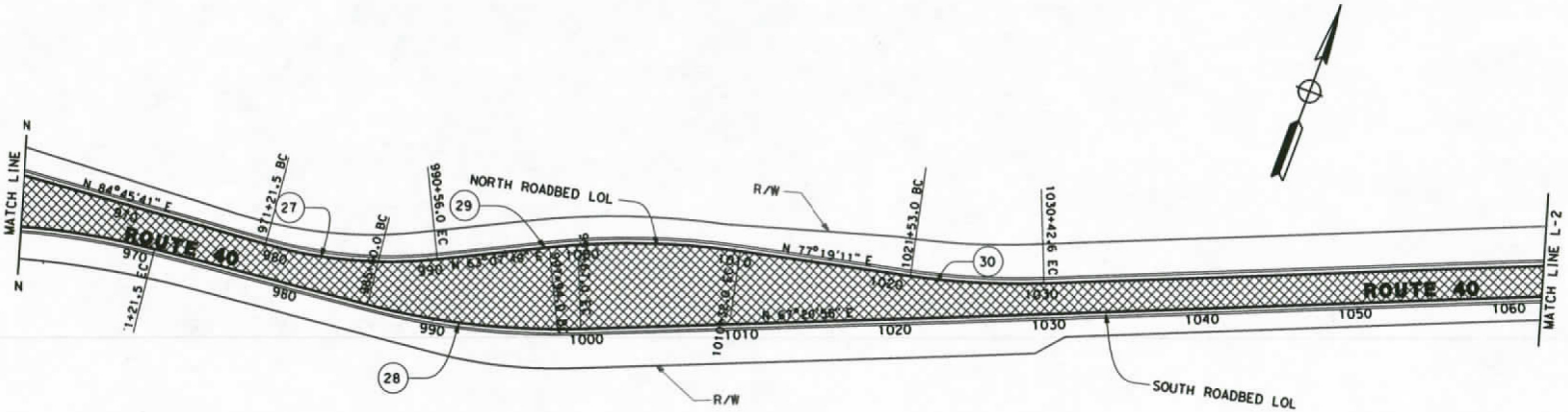
REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

CURVE DATA

No. ⊙	R	Δ	T	L
20	4000	17°07'58"	602.54	1196.09
21	4000	12°40'14"	444.10	884.57
22	3500	10°34'17"	323.80	645.77
23	5000	24°11'41"	1071.67	2111.39
24	4984	18°43'21"	821.63	1628.62
25	3000	32°50'18"	884.04	1719.41
26	5000	26°04'48"	1158.02	2275.91
27	3000	21°37'52"	573.12	1132.60
28	5000	16°07'36"	708.34	1407.32
29	5000	14°11'22"	622.32	1238.26
30	5111	09°58'16"	445.89	889.52





SCALE 1" = 400'

SEGMENT 2
LAYOUT
L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	13	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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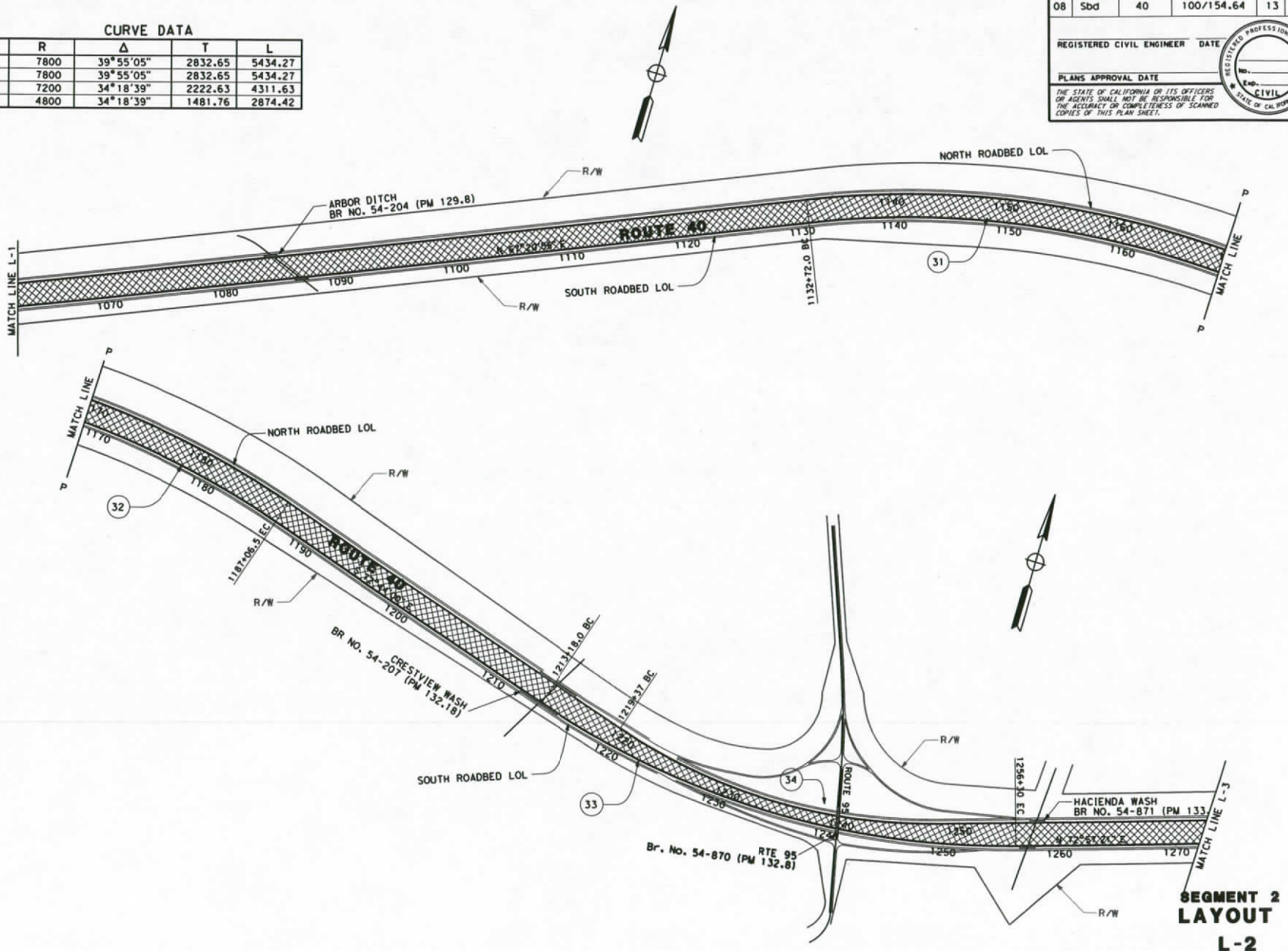
REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

CURVE DATA

No. ⊛	R	Δ	T	L
31	7800	39°55'05"	2832.65	5434.27
32	7800	39°55'05"	2832.65	5434.27
33	7200	34°18'39"	2222.63	4311.63
34	4800	34°18'39"	1481.76	2874.42



SEGMENT 2
LAYOUT
L-2

SCALE 1" = 400'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	14	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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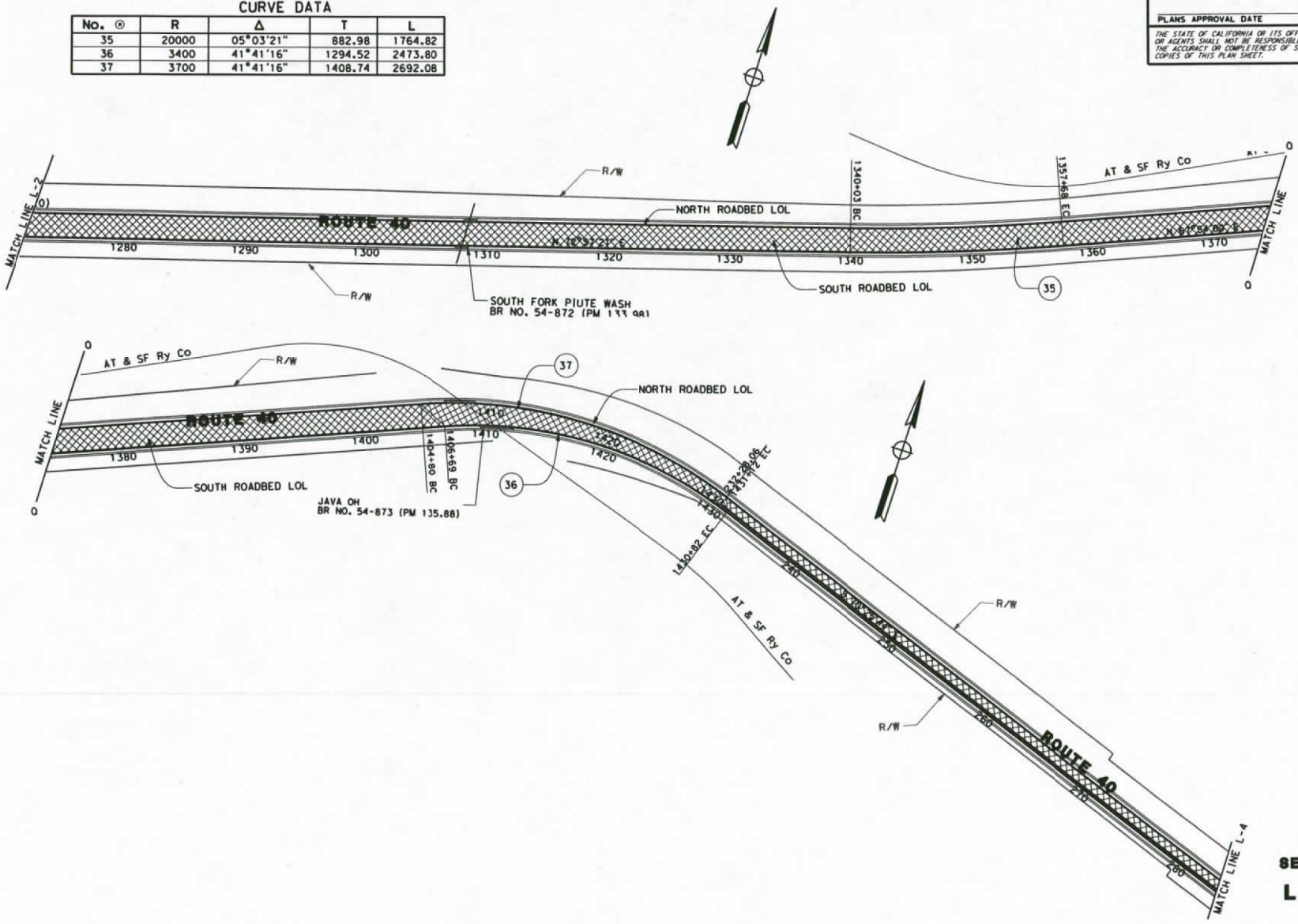
REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

CURVE DATA

No. ⊙	R	Δ	T	L
35	20000	05°03'21"	882.98	1764.82
36	3400	41°41'16"	1294.52	2473.80
37	3700	41°41'16"	1408.74	2692.08



SCALE 1" = 400'

SEGMENT 2

LAYOUT

L-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

CALCULATED/ DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	15	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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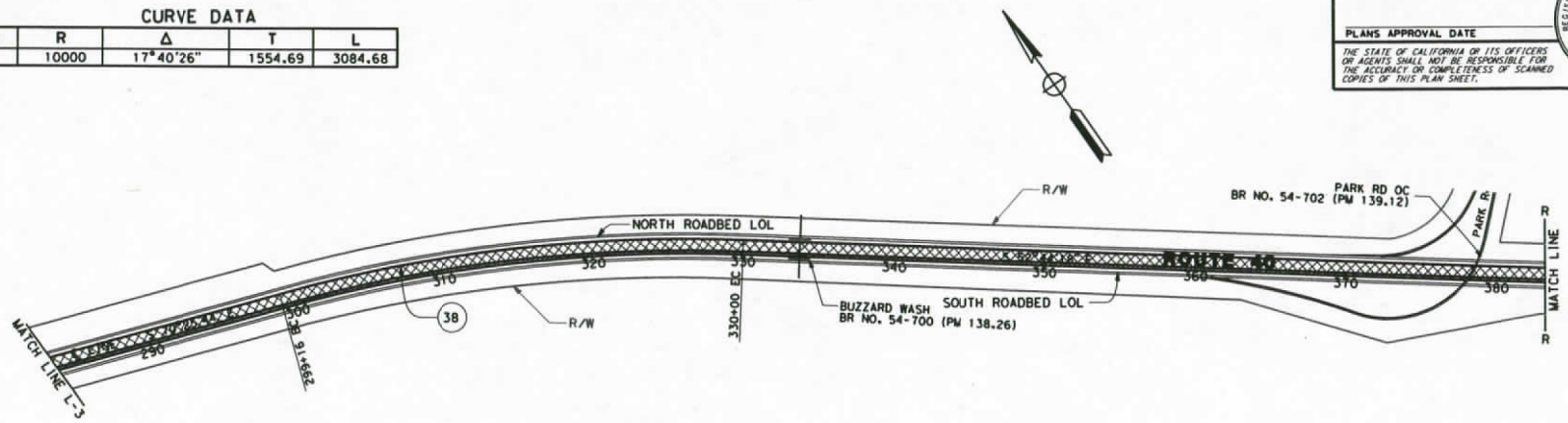
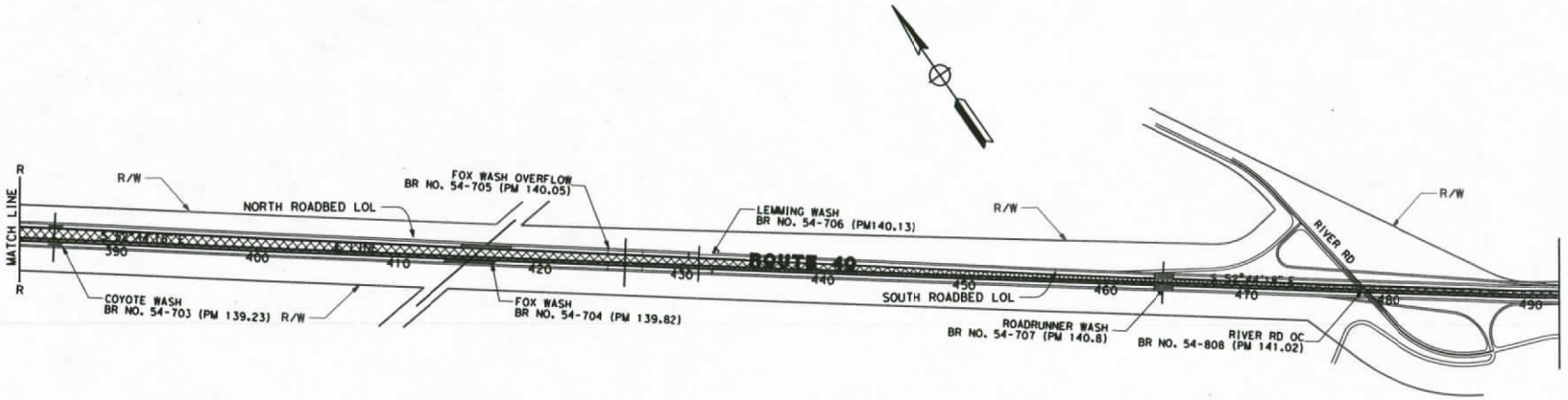
REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

CURVE DATA

No. ⊙	R	Δ	T	L
38	10000	17°40'26"	1554.69	3084.68





SEGMENT 2

LAYOUT

L-4

SCALE 1" = 400'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	16	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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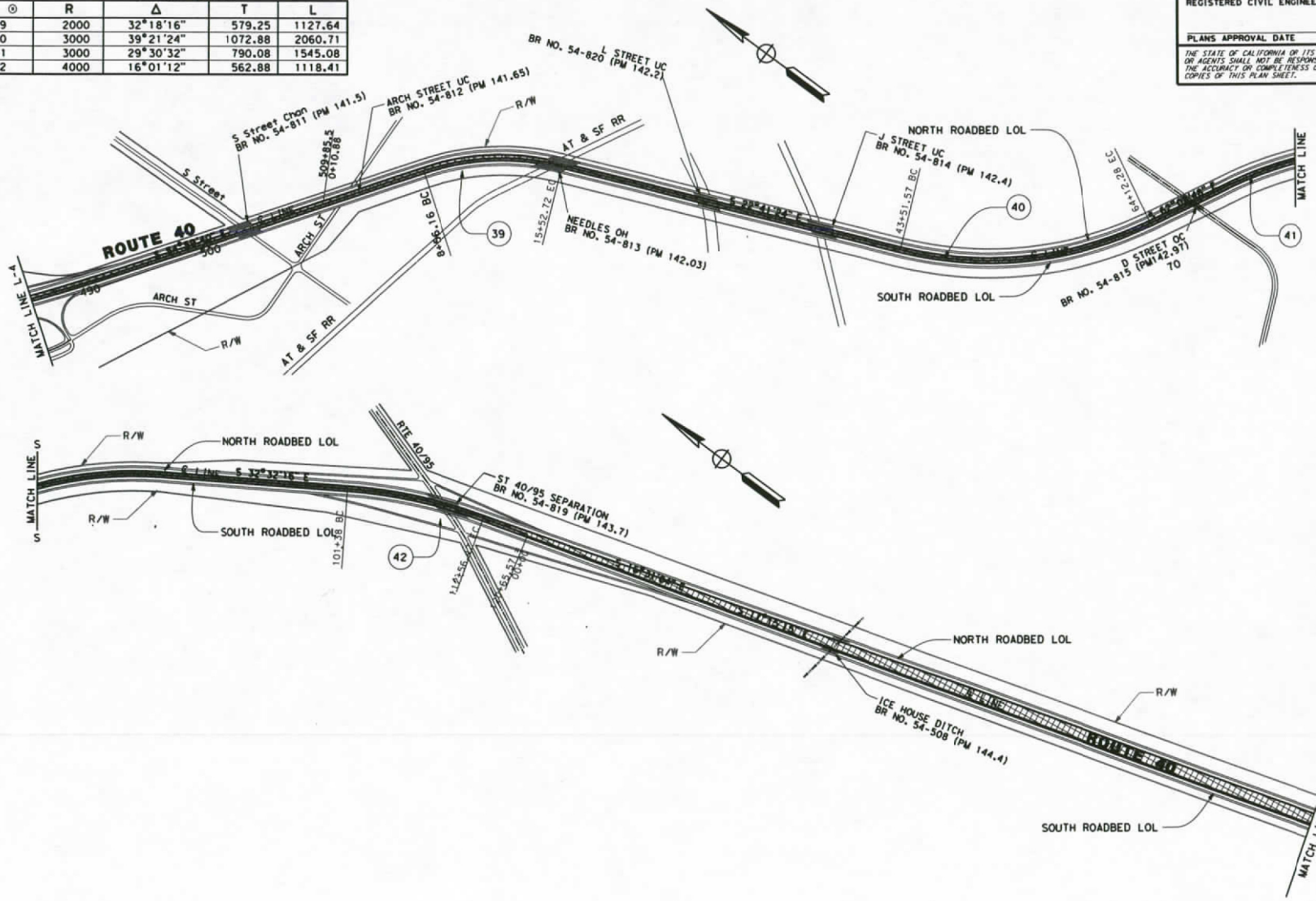
REGISTERED PROFESSIONAL ENGINEER NO. EXP. CIVIL STATE OF CALIFORNIA

CURVE DATA

No. ⊙	R	Δ	T	L
39	2000	32°18'16"	579.25	1127.64
40	3000	39°21'24"	1072.88	2060.71
41	3000	29°30'32"	790.08	1545.08
42	4000	16°01'12"	562.88	1118.41



SEGMENT 2

LAYOUT

L-5

SCALE 1" = 400'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	40	100/154.64	17	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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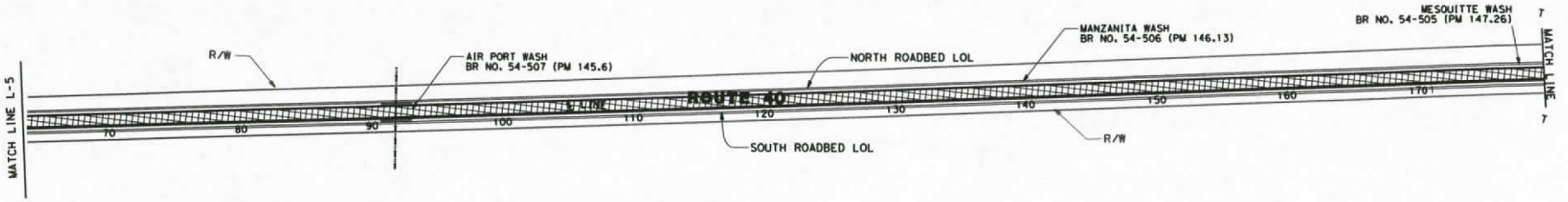
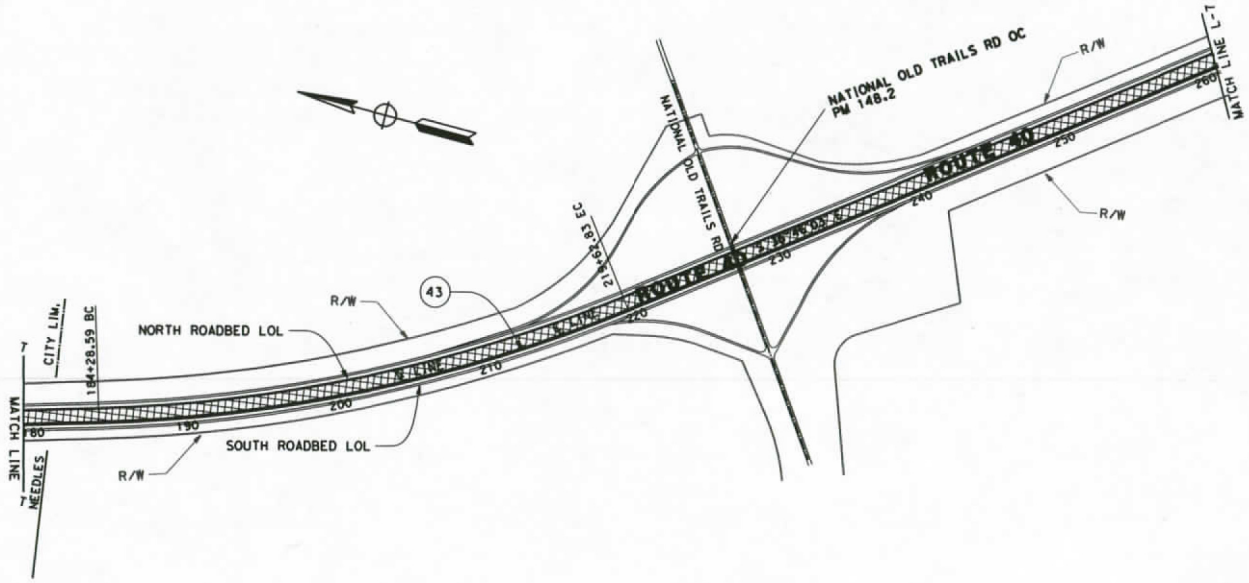
REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

CURVE DATA

No. ⊙	R	Δ	T	L
43	10000	20°14'59"	1785.75	3534.24





SEGMENT 2
LAYOUT

SCALE 1" = 400'

L-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	18	19

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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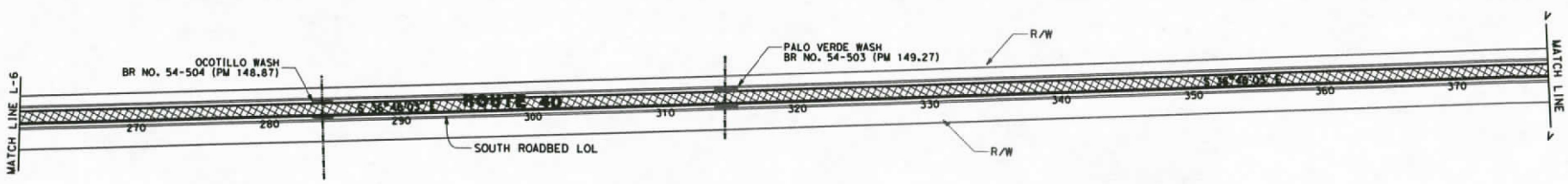
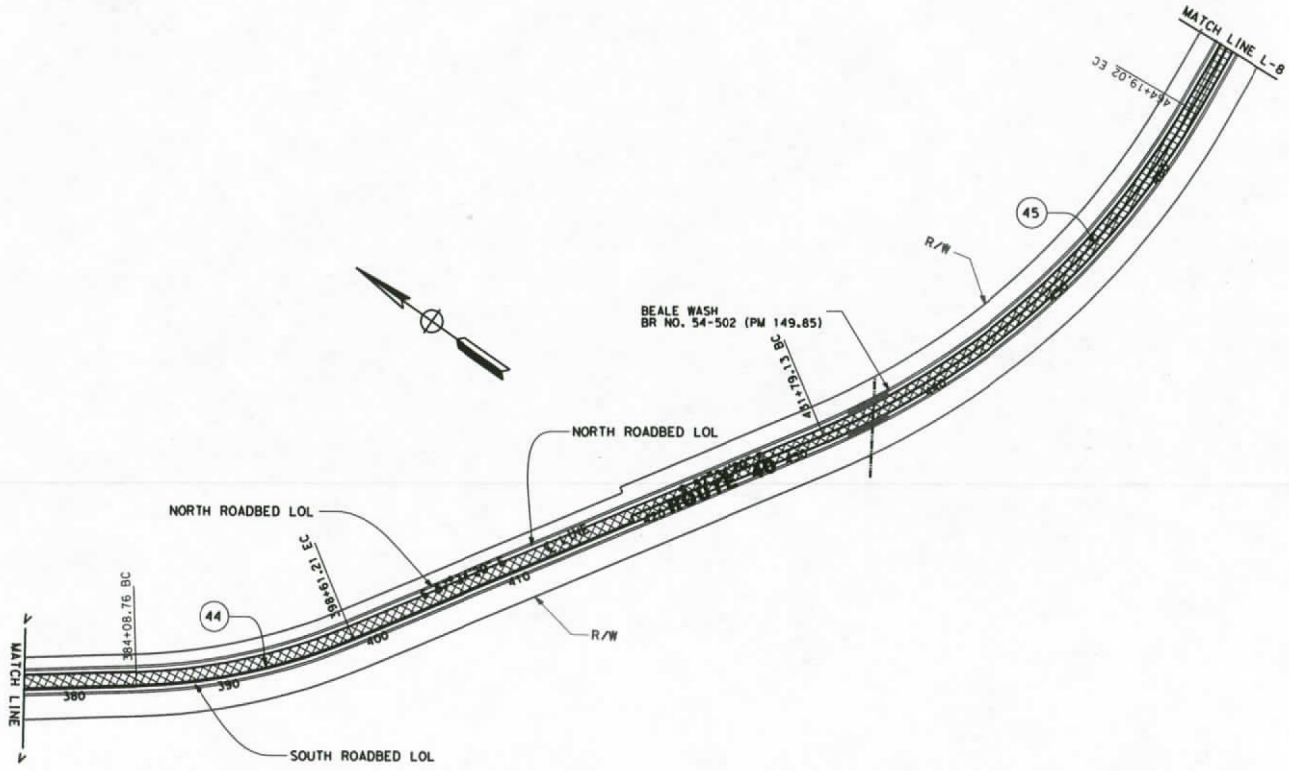
REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

CURVE DATA

No. ⊙	R	Δ	T	L
44	4000	20°48'17"	734.31	1452.44
45	5000	37°07'35"	1679.11	3239.89





SCALE 1" = 400'

SEGMENT 2

LAYOUT

L-7

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Sbd	40	100/154.64	19	19

REGISTERED CIVIL ENGINEER DATE

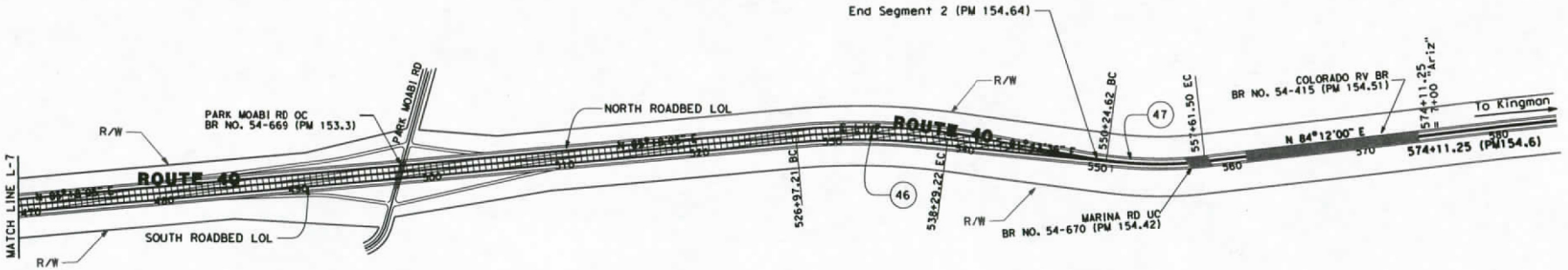
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CURVE DATA

No. ⊛	R	Δ	T	L
46	5000	12°58'19"	568.44	1132.02
47	3000	14°04'24"	370.30	736.88



SCALE 1" = 400'

SEGMENT 2

LAYOUT

L-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

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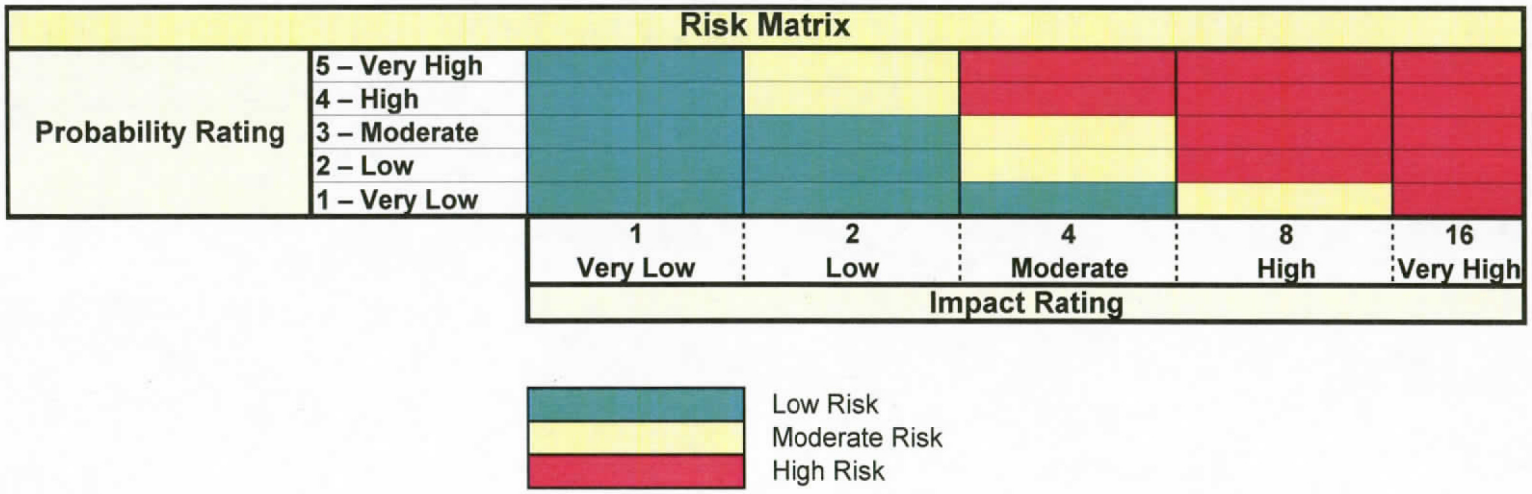
DATE REVISED

ATTACHMENT C

RISK ASSESSMENT

LEVEL 2 - RISK REGISTE 5/26/2015				Project Name: SBD-040-PM PM R100.0 Essex Road to Arizona State Line. Regrade Cross Median Slope			DIST- EA: 08-0R140					Project Manager: Rafih Achy			Project ID: 812000024	
Risk Identification							Risk Assessment						Risk Response			
Status	ID #	Type	Category	Title	Risk Statement/Risk in Red	Current status/assumptions	Probability	Cost Impact	Cost Score	Time Impact	Time Score	Rationale	Strategy	Response Actions	Risk Owner/Division	Updated
Active	100	Threat	Environmental	Right of Way Costs and Land Acquisiton Schedule for Environmental Mitigation.	Because the R/W capital costs for off-site environmental mitigation is yet to be negotiated with Calif Department of Fish and Wildlife, the programmed amount might not be sufficient.		3-Moderate	4 -Moderate	12				Accept	A PCR for additional funds might be required.	Environmental and Rafih Achy	5/26/2015
Active	110	Threat	Design	Capital Costs	If there is a need to repair the existing culverts, the total project cost may increase.		2-Low	2 -Low	4				Mitigate	Check with Maintenance to find out if there are recent culvert inspections that might identify the need for culvert repairs.	Diboro Kanabolo	5/26/2015
Active	120	Threat	Design	Water Source	The source of water for compaction is unknown at this stage, this may increase the project cost.		2-Low	2 -Low	4				Mitigate	The source of water should be identified in the PS&E phase.	Diboro Kanabolo	5/26/2015
Active	130	Threat	Environmental	Cultural Resources	Because this project is in an area where cultural resources are present, additional studies may determine the need for a Native American Monitor and/or a qualified Archealogical Monitor during construction, and this will increase the capital cost of the project.		2-Low	4 -Moderate	8				Accept		Gabriella Duff and Rafih Achy	5/26/2015
Active	140	Threat	Environmental	Listing on the National Register of Historic Places	Because technical studies may identify a potential area(S) eligible for listing on the National Register of Historic Places, this could delay the PA&ED milesone date.		2-Low	4 -Moderate	8				Avoid	Design/PDT will endeavor to avoid any of these areas	Gabriella Duff and Rafih Achy	5/26/2015
Active	150	Threat	Environmental	Biological Surveys	Depending upon the findings of the biological surveys, additional surveys and mitigation may be required, and this could increase costs and delay the project schedule.		3-Moderate	4 -Moderate	12	2 -Low	6		Accept		Gabriella Duff	5/26/2015
Active	160	Threat	Design	Grading, Altered Drainage Configuration and the 1602 Permit	Because the grading being done on this project will alter the drainage configuration , this could impact the 1602 Permit and increase the costs of the project.		2-Low	4 -Moderate	8				Mitigate	Design will keep these alternations to a minimum.	Diboro Kanabolo	5/26/2015
Active	170	Threat	Design	Earthwork quantity capital cost	Because the actual earthwork quantity will not be known until survey filaes are ready for Design to generate cross section, the actual construction capital cost might go up.									A PCR might be needed to increase capital cost.		

Impact Definitions					
Rating -->	Very Low	Low	Moderate	High	Very High
Cost Impact of Threat (CO + COS)	Insignificant cost increase	<5% cost increase	5-10% cost increase	10-20% cost increase	>20% cost increase
Cost Impact of Opportunity (CO + COS)	Insignificant cost reduction	<1% cost decrease	1-3% cost decrease	3-5% cost decrease	>5% cost decrease
Schedule Impact of Threat	Insignificant slippage	<1 month slippage	1-3 months slippage	3-6 months slippage	>6 months slippage
Schedule Impact of Opportunity	Insignificant improvement	<1 month improvement	1-2 months improvement	2-3 months improvement	>3 months improvement
Probability	1–9%	10–19%	20–39%	40–59%	60–99%



ATTACHMENT D

RIGHT OF WAY DATA SHEET

Date: June 5, 2015
REVISION
08-SBd 040 - PM R100.00/154.65
Re-grade Median Cross Slope
EA 0R140 PN #0812000024

To: DON BAO

From: DAVID R CHAVEZ,
R/W Project Delivery

Subject: Current Estimated Right of Way Costs

We have completed a revised ROW data sheet for estimate of the right of way costs for the above-referenced project based on information we received from you on June 4, 2015 and the following assumptions and limiting conditions:

[ ] 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.

[ ] 2. The transportation facilities have not been sufficiently designed so that the estimator could determine the damages to any of the remainder parcels affected by the project.

[X] 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.

[ ] 4. We have determined there are no right of way functional involvement in the proposed project at this time, as designed.

Right of Way Lead Time will require a minimum of 12 months after we begin receiving final right of way requirements (PYPSCAN node No. 224), necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements (PYPSCAN node No. 225), we will require a minimum of 9 months prior to the date of certification of the project. Either of these actions may reflect adversely on the District's other programs or our public image generally.

*TOTAL PROJECT HOURS FOR R/W: **367**

*NOTE: THESE HOURS ARE PRELIMINARY BASED ON THE INFORMATION PROVIDED WITH THE DATA SHEET REQUEST. HOURS ARE SUBJECT TO CHANGE AS NEW INFORMATION IS PROVIDED.

***A Data Sheet previously completed on November 12, 2014. This revised Data Sheet has been completed due to the changes in Offsite Mitigation.**

EVNT RW	6/5
COST RW1 - 6	
TEXT TI	6/5
SCAN	6/5
CLASS	
AGRE	
TPRC	

Attachments:
[XX] Right of Way Data Sheet
[XX] Utility Information Sheet
[XX] Railroad Information Sheet

Date: June 5, 2015
REVISION
08-SBd 040 - PM R100.00/154.65
Re-grade Median Cross Slope
EA 0R140 PN #0812000024

1. Right of Way Cost Estimate:

			Value
A.	Acquisition, including Excess Lands Damages, Goodwill, Major Rehabilitation, and Environmental Permits to Enter	$	0.00
B.	Acquisition of Offsite Mitigation.	$	10,000,000.00
C.	Utility - Relocation (State share)	$	0.00
	Potholing (@ $500.00ea)	$	2,000.00
D.	RAP	$	0.00
E.	Clearance/Demolition	$	0.00
F.	Title and Escrow Fees	$	0.00
G.	Project Permit Fees	$	10,000.00
H.	Condemnation Costs	$	0.00
I.	**Total R/W Estimate:**	**$**	**10,012,000.00**
J.	Construction Contract Work	$	0.00

1a. Real Property Services:

A.	Routine Maintenance (Object Code 058)	$	0.00
B.	Advertising Costs (Object Code 039)	$	0.00
C.	Utility Costs (Object Code 002)	$	0.00
D.	Total Real Property Services Estimate:	$	0.00

2. Anticipated Pypscan Date of Right of Way Certification 10/2020

3. Parcel Data:

Type	Dual/Appr	Utility Involvement
X		U4-1
A 1		-2
B		-3
C		-4
D		U5-7 6
E xxxx		-8
F xxxx		-9

Total 1

RR Involvement	No
C&M Agreement	0
Svc Contract	0
OE Clearances	0
Clauses	0
LIC/ROE	0
Government Lands	Yes
Number of Parcels	1
Misc. R/W Work	0
RAP Displacement	No
Clear/Demo	0
Const Permits	0
Condemnation	0
Permits to Enter-ENV	0

Areas: Right of Way: S.F. 0
Excess: S.F. 0
No. Excess Land Parcels: 0

4. Are there major items of construction contract work?
   Yes ___ No _X_ (If yes, explain.)

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.).

   Type and Number of Parcels:
   Fee 0
   Partial 0
   Full 0
   Easements 1
   Temporary 0
   Permanent 1

   NOTE: Coordination with BLM might be needed. See Railroad and Gov't Lands Information Sheet.

6. Is there an effect on assessed valuation?
   Yes ___ Not Significant ___ No _X_ (If yes, explain.)

7. Are utility facilities or rights of way affected?
   Yes ___ No _X_ (If "Yes," attach Utility Information Sheet, Exhibit 4-EX-5.)
   The following checked items may seriously impact lead time for utility relocation:
   ☐ Longitudinal policy conflict(s).
   ☐ Environmental concerns impacting acquisition of potential easements.
   ☐ Power lines operating in excess of 50 KV and substations.
   (See attached Exhibit 4-EX-5 for explanation.)

8. Are railroad facilities or rights of way affected? Yes ____No _X_
   (If yes, attach Railroad Information Sheet, Exhibit 4-EX-6.)

9. Were any previously unidentified sites with hazardous waste and/or material found? Yes ___ None Evident _X_ (If yes, attach memorandum per Procedural Handbook Chapter 4, Section 4.01.10.00.)

10. Are RAP displacements required? Yes ___ No _X_(If yes, provide the following information.)
    No. of single family ____ No. of business/nonprofit ____
    No. of multi-family ____ No. of farms ____

    Based on Draft/Final Relocation Impact Statement/Study dated _____, it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

11. Are there material borrow and/or disposal sites required?
    Yes _X_ No ___ (If yes, explain.) **Design indicated contractor to provide.**

12. Are there potential relinquishments and/or abandonments?
    Yes ___ No _X_ (If yes, explain.)

13. Are there existing and/or potential Airspace sites?
    Yes ___ No _X_ (If yes, explain.)

14. Indicate the anticipated Right of Way schedule and lead time requirements.
    (Discuss if District proposes less than PMCS lead time and/or if significant pressures for project advancement are anticipated.)

    PYPSCAN lead time (from Maps to R/W to project certification) _6_months.

15. Is it anticipated that all Right of Way work will be performed by CALTRANS staff?
    Yes _X_ No ___ (If no, discuss.)

Date: June 5, 2015
REVISION
08-SBd 040 - PM R100.00/154.65
Re-grade Median Cross Slope
EA 0R140 PN #0812000024

Evaluations prepared by:

Right of Way: Name DAVID ADAMS Date 6/5/15

Railroad: Name DAVID BUZON Date 6/8/2015

Utilities: Name TANISHA BARFIELD Date 6/9/15

Government Lands: Name ANTHONY RIZZI Date 6/8/15

Property Management: Name JACKIE WILLIAMS Date 6-8-15

Reviewed By:

DAVID R CHAVEZ, Senior
Project Coordination
District 8, Right of Way

Date 6/11/15

I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and I find this Data Sheet complete and current.

RENE FLETCHER,
Acting Deputy District Director
District 8, Right of Way

Date 6/12/15

cc: Program Manager
Project Manager

This utility estimate was prepared using "project specific" data and unit values. This information is not to be utilized for the updating or preparation of this, or any other Right of Way Cost Report or Utility Information Sheet.

08-SBd-40 PM R100.0/154.65
EA 0R140 PR# 08 1200 0024

UTILITY INFORMATION SHEET

1. Name of utility companies involved in project:

AT&T - DISTRIBUTION
CITIZENS COMMUNICATIONS
CITY OF NEEDLES
EL PASO NATURAL GAS COMPANY
GOLDEN VALLEY CABLE&COMMUNICATION
LEVEL 3 COMMUNICATIONS
PONDEROSA TELEPHONE CO
QUESTAR LINE 90 COMPANY
SC GAS - TRANSMISSION
SW GAS - SOUTH NEVADA
SCE DIST – 29 PALMS
TERRADEX. INC
FORT MOJAVE TRIBAL UTILITIES

2. Types of facilities and agreements required:

Overhead:Telephone, Electric, Telecomm Underground: Gas, Petroleum Pipeline
Notice to Owner, Utility Agreement, Pos Loc Agreements

3. Is any facility a longitudinal encroachment in existing or proposed access controlled right of way? **No**

4. Additional information concerning utility involvements on this project. Is there any special circumstances/facilities requiring additional lead time?

This project proposes to re-grade the median cross slopes from the existing 6:1 or steeper gradients to 20:1 inside the 30 food clear recovery zone on I-40 near Needles from Essex Road (PM 100.0) to Arizona County line (PM R154.65) in San Bernardino County. Drainage modifications and improvements in the median will be included. Preserving and improving the existing California Highway Patrol(CHP) crossovers are also included. All work will be done within the state Right of Way.

Transverse gas line is locate in the median of SR 40 near PM 134, potholing and/or relocation may be required.

Design must provide the Right of Way Coordinator (UC) with geometric base maps and a written request for utility verification [see Design Task D282 (220.D)]. The UC will then contact all appropriate Utility Owners (UO's) for verifications and corrections. The UC will then provide Design with the updated information and/or UO As-Builts and Design can then prepare accurate utility location maps or U-Sheets. Design will then determine all utility conflicts that require positive location and/or relocation [see Design Task D283 (220.D)].

5. PM Right of Way Cost Estimate Phase 0 funding:
Potholing costs: Potholes 4 @ $500.00 per Pothole (Vacuum Extraction and Probing) **$2,000.00**

6. PMCS input information:
Total estimated cost of State's obligation for utility relocation on this project:
Once potholing is completed, if any utility facilities are in conflict, then Design must request this datasheet to be revised to reflect costs.
CS input information: Total estimated cost of State's obligation for utility relocation on this project:

(Phase 9 funding) $ 0

Utility Involvement

U4-1		U5-7	6
-2		-8	
-3		-9	
-4			

Prepared By _____ Date: 6/5/15
TANISHA BARFIELD
Right of Way Utility Estimator

Date: June 5, 2015
REVISION
08-SBd 040 - PM R100.00/154.65
Re-grade Median Cross Slope
EA 0R140 PN #0812000024

RAILROAD AND GOVERNMENT LANDS INFORMATION SHEET

1. Describe railroad facilities or rights of way affected.

   BNSF Tracks cross Rte 40 at the following locations within the scope of the work but are not affected:

@PM 107.2 / Goffs Rd	**BR #54-807**
@PM 132.8 / Rte 95	**BR #54-870**
@PM 143.7 /Rte 40/95IC	**BR #54-819**

2. When branch lines or spurs are affected, would acquisition and/or payment of damages to businesses and/or industries served by the railroad facility be more cost effective than construction of a facility to perpetuate the rail service? Yes ____ No__**X**__(If yes, explain.)

3. Discuss types of agreements and rights required from the railroads. Are grade crossings requiring service contracts, or grade separations requiring construction and maintenance agreements involved?

   NONE

4. Remarks: ***See #1***

5. Is Government Lands involved? Yes __**X**__ No ___
   If yes, number of parcels __**1**__
   Agency Name and Explanation: **BLM – Area is within Quiet Title area. Concurrence is needed prior to construction.**

6. PMCS Input Information

RR Involvement	No
C&M Agreement	0
SVC Contract	0
OE Clearances	0
Clauses	0
LIC/RE	0
Government Lands	**Yes**
Number parcels	**1**

Prepared By: _____ Date: 6/8/2015
DAVID BUZON
Right of Way Railroad Coordinator

Prepared By: _____ Date: 6/8/15
ANTHONY RIZZI
Right of Way Government Lands Coordinator

Date: June 5, 2015
REVISION
08-SBd 040 - PM R100.00/154.65
Re-grade Median Cross Slope
EA 0R140 PN #0812000024

PROPERTY MANAGEMENT/EXCESS LAND INFORMATIONAL SHEET

WBS CODE	WBS ACTIVITY	NUMBER OF PARCELS	HOURS	COST
	PROPERTY MANAGEMENT	**NOT APPLICABLE**	**X**	
195.40.05	Fair Market Rent Determinations (Residential)			
195.40.10	Fair Market Rent Determinations (Non-Residential)			
195.40.15	Regular Rental Property Management			
195.40.20	Property Maintenance and Rehabilitation (Rental Property)			
195.40.25	Property Maintenance and Rehabilitation (Non-Rental Property)			
195.40.30	Hazardous Waste and Hazardous Materials			
195.40.35	Transfer of Property to Clearance Status			
270.25.03	Secure Lease for Resident Engineer's Office Space or Trailer			
		Subtotal		
	EXCESS LAND	**NOT APPLICABLE**	**X**	
195.45.05	Excess Land Inventory			
195.45.10	Excess Land Appraisal and Public Sale Estimate			
195.45.15	Excess Land Inventory ("Roberti Bill")			
195.45.20	Excess Land Sales to $15,000			
195.45.25	Excess Land Sales from $15,001 to $500,000			
195.45.30	Excess Land Sales over $500,000			
195.45.35	CTC and AAC Coordination			
		Subtotal		
		TOTAL HOURS (ONLY)		

Jackie Williams

Date: 6-8-15

JACKIE WILLIAMS
Property Management
Excess Land

ATTACHMENT E

STORM WATER DATA REPORT

Dist-County-Route: 08-SBd-40
Post Mile Limits: PM R100/R154.64
Project Type: Regrading Existing Median Slopes
Project ID (or EA): 0812000024 (0R140K)
Program Identification: HB1-201.015
Phase: ☒ PID
☐ PA/ED
☐ PS&E

Regional Water Quality Control Board(s): Colorado River Basin

1.	Is the project required to consider incorporating Treatment BMPs?	Yes ☐	No ☒
2.	Does the project disturb 5 or more acres of soil?	Yes ☒	No ☐
3.	Does the project disturb more than 1 acre of soil and not qualify for the Rainfall Erosivity Waiver?	Yes ☒	No ☐
4.	Does the project potentially create permanent water quality impacts?	Yes ☐	No ☒
5.	Does the project require a notification of ADL reuse	Yes ☐	No ☒

If the answer to any of the preceding questions is "Yes", prepare a Long Form – Storm Water Data Report.

Estimate Construction Start Date: 9/30/2022 Construction Completion Date: 5/31/2024

Separate Dewatering Permit (if yes, permit number) Yes ☐ Permit #_____ No ☒

Erosivity Waiver Yes ☐ Date: _____ No ☒

A Long Form – Storm Water Data Report will be prepared during Project Approval & Environmental Document (PA/ED) and Plans, Specifications, and Estimates (PS&E) phases of this project.

This Short Form – Storm Water Data Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

Don Bao 5/6/15

Don Bao, Registered Project Engineer/Landscape Architect *Date*

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

Patrick Hally 5/7/2015

Patrick Hally, District/Regional SW Coordinator or Designee *Date*

[Stamp Required for PS&E only)

ATTACHMENT F

CATEGORY ASSIGNMENT APPROVAL

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Serious drought.
Help Save Water!

To: CHRISTY CONNORS
Deputy District Director
Design

Date: May 13, 2015

File: 08-Sbd-40-PM 100/154.64
Re-grade Median Cross Slope
08-804-0R140K-0812000024
Reduction 201.015

MM

From: MATTHEW MAESTAS
Office Chief
Pre-Programming/Engineering Studies

Subject: **REQUEST FOR CATEGORY 4B APPROVAL**

A Project Study Report (PSR) is being prepared for the above referenced project. This project will be divided into two segments.

Segment 1: PM 100.0 to PM 125.0

Segment 2: PM 125.0 to PM 154.64

This project consists of re-grading the existing median cross-slope with 10:1 or flatter at various locations in the above-specified limits. Additional Right of Way will not be required for this project.

In accordance with Chapter 8, Section 5 of the Project Development Procedures Manual, your approval is requested to assign the above-referenced project to Category 4B.

Category 4B is recommended based on the following project considerations:

1. The project will not increase traffic capacity of highway.
2. The project will not require substantial new right-of-way.
3. The project will require a Initial Study/Negative Declaration (CEQA) and Environmental Assessment.

Approved by: _____ 5/15/15
for CHRISTY CONNORS
Deputy District Director
Design

Date

ATTACHMENT G

PRELIMINARY ENVIRONMENTAL ANALYSIS REPORT (PEAR)

PRELIMINARY ENVIRONMENTAL ANALYSIS REPORT

1. Project Information

District	County	Route	PM	EA0R140
08	SBd	40	100/154.64	PN 0812000024
Project Title: Interstate 40 (I-40) Re-Grade Median Cross Slope (EssexRoad to State Line)				
Project Manager Rafih Achy			Phone # 909-388-4077	
Project Engineer Don Bao			Phone # 909-383-6323	
Environmental Office Chief/Manager Aaron P. Burton			Phone # 909-383-2841	
PEAR Preparer Virgal T. Woolfolk			Phone # 909-383-1593	

2. Project Description

The scope of the I-40 Re-grade Median Cross Slopes project is planned to regrade the existing median cross slopes inside the thrity (30) feet clear recovery zone (CRZ), from 6:1 or steeper gradient to 10:1 or flatter on Interstate 40 (I-40) from Essex Road Overcrossing (PM 100.0) in the City of Fenner to State Line Border of California/Arizona (PM 154.6) in the City of Needles, in the San Bernardino County. This project is currently planned to be divided into two (2) segments due to the lengthy project limits and complexities of the Environmental Documents. The planned segments and location breakdown are as follows:

SEGMENT	*EA*	*LOCATION*
1	*0R140K*	*PM 100/125*
2	*0R142K*	*PM 125/154.64*

Purpose of Project

The purpose of the proposed project is to correct the existing median cross slope to create a clear recovery zone (CRZ) within the project limits, which vary between 2:1 to 6:1. Here, within the project limits, the cross slope median is too steep to allow traffic traveling to have a safe traversable and/or recoverable transition back to the highway. Current advisory median cross slope standards require a cross slope gradient of 10:1 or flatter; 20:1 being preferred. Flattening of existing median cross slopes is expected to improve recovery zones and reduce the risk of out-of-control vehicles crossing the median and colliding with opposing traffic.

Need of Project

In its current condition, the proposed project limits between Essex Road Overcrossing (PM 100.0) and the City of Needles near the State border of California/Arizona (PM 154.6) is in need of improvement due to non-standard median cross slopes. Flatting the median by re-grading cross slope would improve the safety of the traveling public. In that the existing I-40 roadway is a four lane freeway with a varied width median that separates the roadbed. The collision rate has been fatal. The accident data, per the Traffic Accident Surveillance and Analysis System (TASAS) - Transportation System Network (TSN) between 01/01/2010 and 12/31/2012, indicates that a total of two hundred two (202) accidents were reported within the project limits. Four (4) of these accidents involved fatalities, while eighty three (83) accidents involved injuries. There are sixty five (65) "overturn" accidents that resulted in three (3) fatalities.

To improve the safety of the traveling public in this segment of I-40, the District's Traffic Operation initiated this safety project under Project Initiation Proposal (PIP) No. 3702 to regrade the existing cross slope median. This project will be funded under the SHOPP Collision Severity Reduction Program (201.015).

Description of Work

- **Alternative 1 (No-Build)**
  The No-Build alternative would maintain the facility in its current condition. No improvements would be implemented at this time; therefore, no capital cost is associated with this alternative. The No-Build alternative would not address or alleviate the forecasted operational and safety issues along this segment of I-40. This alternative would not satisfied the need and purpose.

- **Alterative 2 (Build)**
  As previously stated, due to the lengthy project limits and complexities of the Environmental Documents, this project is divided in two (2) segments. The currently planned segments are as follows:

SEGMENT	EA	LOCATION
1	0R141K	PM 100.0/125.0
2	0R142K	PM 125.0/154.6

This proposed alternative improvement consists re-grading the median cross slopes from existing which vary from 2:1 to 6:1 or steeper to 10:1 or flatter on Interstate 40 (I-40) from Essex Road Overcrossing (PM 100.0) in the City of Needles to State Line Border of California/Arizona (PM 154.6) in the County of San Bernardino. Within the project limit, the cross slope median is too steep to allow traffic traveling to have a safe traversable and/or recoverable transition back to the highway. Current advisory standards for the median cross slopes require a gradient of 10:1 or flatter slope; 20:1 being preferred.

As previously indicated, the proposed improvements are expected to improve recovery zones and reduce the risk of "overturn" accidents in the median. No additional right of way is

required for this alternative. The proposed improvements would require substantial fill material and modification of existing drainage facilities within the median. Drainage modifications and improvement work will consist of reconstruction of existing off-site drainage facilities by extending the storm drain in the median. The cost of the proposed improvements in this alternative is estimated at $ 73,900,000 including support cost. The cost estimate breakdown is as follows:

Roadway	$ 47,000,000
Structure	$ 0
R/W	$ 10,000,000
Total Capital Cost	$ 57,000,000
Total Support Cost	$ 16,900,000
Total Project Cost	$ 73,900,000

The capital cost breakdown for each segment is as follows:

Segment	*EA*	*Capital Cost*
1	*0R141K*	*$25,000,000*
2	*0R142K*	*$22,000,000*
Total		***$ 47,000,000***

3. Anticipated Environmental Approval

Check the anticipated environmental determination or document for the proposed project in the table below.

CEQA		NEPA	
Environmental Determination			
Statutory Exemption	☐		
Categorical Exemption	☐	Categorical Exclusion	☐
Environmental Document			
Initial Study or Focused Initial Study with Negative Declaration or Mitigated ND	☒	Environmental Assessment with Finding of No Significant Impact	☒
Environmental Impact Report	☐	Environmental Impact Statement	☐
CEQA Lead Agency (if determined):		Caltrans	
Estimated length of time (months) to obtain environmental approval:		18-24 months	
Estimated person hours to complete identified tasks:		16,549 hours	

4. Special Environmental Considerations

Biology:

This proposed project is located within the Mojave Desert and is located between two Bureau of Land Management's Desert Wildlife Management Areas (DWMAs): Piute-

4. Special Environmental Considerations

Biology:
This proposed project is located within the Mojave Desert and is located between two Bureau of Land Management's Desert Wildlife Management Areas (DWMAs): Piute-Fenner to the north of I-15 and Chemehuevi to the south, from Postmile (PM) R (realigned) 75 until approximately PM 100. Both DWMAs are also considered Desert Tortoise Critical Habitat areas by the United States Fish and Wildlife Service. The median is considered Caltrans right-of-way and does not fall under the DWMAs, but some of the median can be considered habitat for Desert Tortoise. The Creosote bush shrub is also dominant community in the area but there have been Yuccas and Cacti seen in the median. It is recommended a Desert tortoise (*Gopherus agassizii*) – that is a State and Federal threatened species – survey and a rare plant survey be conducted during "0" phase to ensure if any tortoise and/or sensitive plants are present in the project impact area. Caltrans will implement the appropriate avoidance and minimization measures.

Wetlands:
Several washes are present in the project action area. These washes may reveal hydrophitic vegetation which could mean the presence of wetlands in the area. The National Wetlands Inventory shows the potential presence of wetlands upstream and downstream of the project site. A Jurisdictional Delineation will be required to determine the presence of jurisdictional waters and wetlands within the project area and to quantify the acreage of potential impacts to jurisdictional waters. Using National Hydrology Data on flows and blue lines; from Postmile R75-100 waters appear to flow towards the Inland deserts and eventually Dry Lakes.

Invasive Pest Plant Species:
Executive Order 13112 requires that any federal action may not cause or promote the spread or introduction of invasive species.

Cultural:
Depending upon the results of the records search and technical studies, Extended Phase I (XPI), and/or Phase II, Phase III archaeological excavations, archaeological monitors, and Native American monitors may become necessary. This potential remains an unknown at this time.

This project crosses BLM land and coordination will be required. Due to the potential for a large number of previously unrecorded cultural resources to be present extensive consultation and coordination with the BLM, Native American groups, and the State Historic Preservation Office (SHPO) will be necessary.

A Paleontological Inventory Report (PIR) and a Paleontological Evaluation Report (PIR/PER) should be anticipated.

Water Quality and Storm Water Runoff:
Permanent Treatment and/or Design Pollution Prevention and Temporary Construction BMPs would be required. A Storm Water Data Report (SWDR) would be required to determine the necessary BMPs should be included in this project.

Costs for "Environmental Obligation" would consist of permanent treatment BMPs, permanent design pollution prevention BMPs and temporary construction BMPs. Permanent treatment and design pollution prevention BMPs are identified in the Storm Water Management Plan (SWMP), which is required by the Caltrans Statewide NPDES permit.

Spring and Watson Washes are the receiving water bodies and are not 303(d) listed; however, since there is work to be done in the channel and there will be over an acre of soil disturbance, BMPs may need to be considered during PA/ED. Approximately $250,000 should be added to the project to cover costs associated with incorporating BMPs. This price does not include costs for additional right-of-way acquisition, costs for constructing BMPS or for establishing drainage easements (2010 Project Planning & Design Guide).

Specific Construction BMPs and their costs will be identified at the PA/ED and PS&E stages.

The completion of an Interim Water Quality Questionnaire at the PID phase has determined that a Water Quality technical report is needed during the PA/ED phase.

Hazardous Waste/Materials: An asbestos report and lead-based paint would be required.

Landscape: A Scenic Resource Evaluation (SRE) would be required to evaluate the need for a Visual Impact Assessment (VIA).

5. Anticipated Environmental Commitments

Biological
A desert tortoise protocol survey and a burrowing owl habitat assessment will be required within the project action area. Consultation with the U.S. Fish and Wildlife Service and coordination with the CA Department of Fish and Wildlife is anticipated. Project impacts to Desert Tortoise habitat will require mitigation. Mitigation ratios will be negotiated with the appropriate regulatory agencies. During construction, a desert tortoise monitor will monitor construction activities. A temporary desert tortoise fence may be required for the entire length of the project.

Waters of the State, Waters of the United States (US) and wetlands may be present in the project area and may be permanently impacted by grading and rock slope protection. If wetlands and/or other waters are impacted by the project, mitigation will be required. Mitigation typically consists of on-site mitigation or purchase of mitigation credits. Mitigation ratios for impacts to the waters of the State typically varies from 1:1 to 10:1.

Negotiation with Army Corp of Engineers (ACOE) and the California Department of Fish and Wildife (CDFW) will take place to establish final mitigation ratios.

Cultural Studies

If buried cultural resources are encountered during construction, it is Caltrans policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find.

In the event that human remains are found, the county coroner shall be notified and ALL construction activities within 50 feet of the discovery shall stop. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). The person who discovered the remains will contact the District 8 Division of Environmental Planning; Gabrielle Duff, DEBC: (909)383-6933 and Gary Jones, DNAC: (909)383-7505. Further provisions of PRC 5097.98 are to be followed as applicable.

ESA fencing with archaeological and Native American monitoring may be required.

Additional commitments may be required following the conclusion of studies.

6. Permits and Approvals

Biology:

The proposed project may require a 1602 Streambed Alteration Agreement from the CDFG, 404 Nationwide Permit from the ACOE, and 401 Certification from the Regional Water Quality Control Board. Since the project is located within occupied desert tortoise habitat, a biological assessment resulting in a biological opinion from FWS and a 2080.1 permit from the CDFG will be required for this project. The following permits will be required:

- CDFG Code 1602 Streambed Alternation Agreement:
- CDFG Code 2081 Incidental Take Permit
- CWA Section 401 Water Quality Certification Discharge to Waters
- CWA Section 404 Permit for Permanent Discharge to Waters
- FESA Section 7 Biological Opinion

Water Quality and Storm Water Runoff:

This project will use the following two NPDES permits:

- National Pollutant Discharge Elimination System (NPDES) Permit,
- Statewide Storm Water Permit and Waste Discharge Requirements for the State of California, Department of Transportation (Order No. 99-06-DWQ, NPDES No. CAS000003)

A new MS4 permit is likely to be adopted prior to PA/ED. A final signed version of the SWDR may be included with the PID, PR and final PS&E for circulation to obtain functional unit concurrence.

7. **Level of Effort: Risks and Assumptions**

***Please note that the attached WBS work plan estimates reflect work hours only for Environmental units.**

***Costs associated with Treatment BMPs and erosion control requirements are not reflected in Attachment D of this PEAR.**

Biological:

Waters of the State, waters of the United States (US), and wetlands may be present in the project area and may be permanentely impacted by rock slope protection. If wetlands and/or other waters are impacted by this proposed project additional mitigation will be required. Mitigation typically consists of on-site mitigation or purchase of mitigation credits. Mitigation ratios for impacts to the waters of the State typically varies from 1:1 to 10:1. Negotiation with Army Corp of Engineers (ACOE) and the California Department of Fish and Wildlife (CDFW) will take place to establish final mitigation ratios.

- 404 permit: no cost
- 401 permit: $50,000
- 1602 permit: $5000
- Compensatory Mitigation: $250,000

Cultural Studies:

a. No major Native American, BLM, or SHPO concerns or objections.
b. State R/W and BLM land only.
c. No additional scope changes.
d. Most sites will be avoided during construction.
e. Most sites not avoidable, will be CARIDAP eligible and found to be ineligible for the NRHP.
f. One medium size site will undergo Phase II and Phase III investigation and mitigation.

8. PEAR Technical Summaries

8.1 Land Use: A review of the San Bernardino General Plan, the Caltrans Route Concept Report and additional transportation planning/land use documents will be referenced for project approval.

8.2 Growth: An in-depth growth analysis is not anticipated for this project.

8.3 Farmlands/Timberlands: The project footprint does not affect farmlands/timberlands.

8.4 Community Impacts: A Community Impact Assessment is not required. The community of Essex will not be impacted by construction activities within the median of I-40.

8.5 Visual/Aesthetics: A Visual Impact Analysis may be required. Landscape shall address re-vegetation of the disturbed median if required.

8.6 Cultural Resources: A Historical Property Survey Report (HPSR) and an Archaeological Survey Report (ASR) will be required for this projects. Based on results from survey, consultation, and the record search additional reports may be required including but not limited to a Historical Resource Evaluation Report (HRER), Data Recovery Plan, Phase II and III reports. Due to the presence of BLM land in this area, the Caltrans Section 106

Programmatic Agreement (PA) does not apply; additional reports may be required depending on coordination efforts with the BLM.

8.7 Hydrology and Floodplain: Based on the scope of work and physical settings of the project, we do not anticipate any adverse effects to the floodplain or surrounding. According to the Flood Insurance Rate Map on other related projects in the area, the project area is unincorporated and situated in an area where flood hazards are undetermined.
In addition, the delineated flood plains shown on the FIRM maps indicate numerous other watercourses within the project limits for which flood hazards are possible but not determined.

8.8 Water Quality and Storm Water Runoff: The project will be evaluated for potential water quality and storm water runoff impacts (temporary and/or permanent) associated with the project.

8.9 Geology, Soils, Seismic and Topography: The environmental document will address these issues if required.

8.10 Paleontology: A Paleontological records search should be conducted and the results of which will determine whether or not further paleontological studies are warranted.

8.11 Hazardous Waste/Materials: An Initial Site Assessment (ISA) will be required to address the potential for hazardous waste/materials with the project limits. In addition, an asbestos report and lead-based paint survey are required for this project.

8.12 Air Quality: This project is listed in Table 1, Carbon Monoxide (CO) Protocol. It is exempt from air emissions analyses. Therefore, an Air Quality Report is not required.

8.13 Noise and Vibration: This project is a Type III project per Traffic Noise Analysis Protocol. It is exempt from traffic noise analysis. Therefore, a Noise Study Report is not needed.

8.14 Energy and Climate Change: An analysis of energy and climate change issues will not be required.

8.15 Biological Environment: A Natural Environment Study, Jurisdictional Delineation, Biological Assessment and coordination and consultation will be required with State and Federal agencies for this project. A Biological Opinion, and 2081 permit will be required if it is determined in future analysis. Temporary and permanent impacts to sensitive biological resources and jurisdictional waters are anticipated. Avoidance, minimization, and compensatory mitigation for those impacts will be analyzed for this project.

8.16 Cumulative Impacts: An analysis of cumulative impacts analysis is not anticipated.

8.17 Context Sensitive Solutions: Applied as appropriate on all projects.

9. Summary Statement for PSR or PSR-PDS

Biology:

The proposed project is located within the Mojave Desert. Creosote bush shrub is dominant community in the area. Desert tortoise (Gopherus agasizii), a State and Federal threatened species is present within the project vicinity. A rare plant survey will ensure if any sensitive annual plants are present in the project area. Desert tortoise surveys may be required for this project. The project is located within Chemehuevi desert tortoise critical habitat area and in the vicinity of Piute El Dorado desert tortoise critical habitat.

Waters of the State, Waters of the United States (US), and wetlands may be present in the project area and may be permanentely impacted by rock slope protection. If wetlands and/or other waters are impacted by the project, mitigation will be required. Mitigation typically consists of on-site mitigation or purchase of mitigation credits. Mitigation ratios for impacts to the waters of the State typically varies from 1:1 to 5:1.

Negotiation with Army Corp of Engineers (ACOE) and the California Department of Fish and Game (CDFG) will take place to establish final mitigation ratios.
The proposed project will require a 1602 Streambed Alteration Agreement from the CDFG, 404 Nationwide Permit from the ACOE, and 401 Certification from the Regional Water Quality Control Board. Since the project is located within occupied desert tortoise habitat, a biological opinion for FWS and a 20801 permit from the CDFG will be required for this project.

Cultural:
For cultural compliance the APE/PAL should include all anticipated project-related activity areas (e.g., utility relocation, access roads, construction easements, work, equipment storage, and staging areas) as well as reasonably anticipated or known boundaries of archaeological sites and potential historic properties indirectly or directly affected by the project.

A Paleontological records search should be conducted and the results of which shall/should determine whether or not further paleontological studies are warranted.

Water Quality and Storm Water Runoff:
This project will use the following two NPDES permits:

- National Pollutant Discharge Elimination System (NPDES) Permit,
- Statewide Storm Water Permit and Waste Discharge Requirements for the State of California, Department of Transportation (Order No. 99-06-DWQ, NPDES No. CAS000003)

A new MS4 permit is likely to be adopted prior to PA/ED. A final signed version of the SWDR may be included with the PID, PR and final PS&E for circulation to obtain functional unit concurrence.

Landscape:
Landscape would address re-vegetation of the disturbed median (from the detours). There may be additional minor disturbance/environmental issues with the wash bed and its banks but that will be identified by Environmental. Erosion control will expectably be a tackifier for soil stabilization. Re-vegetation will be addressed using the standard special specifications for "Duff."

10. Disclaimer

This Preliminary Environmental Analysis Report (PEAR) provides information to support programming of the proposed project. It is not an environmental determination or document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in the Project Study Report (PSR). The estimates and conclusions in the PEAR are approximate and are based on cursory analyses of probable effects. A reevaluation of the PEAR will be needed for changes in project scope or alternatives, or in environmental laws, regulations, or guidelines.

11. List of Preparers

Cultural Resources Specialist Steve Holm	Date: June 10, 2015
Biologist Specialist Josh Jaffery and Chun-Sheng Wang	Date: June 10, 2015
Community Impacts Specialist Virgal Woolfolk	Date: May 15, 2015
Noise and Vibration Specialist Hoang Pham	Date: June 10, 2015
Air Quality specialist Hoang Pham	Date: June 10, 2015
Paleontology Specialist/liaison Barham Karimi	Date: June 10, 2015
Water Quality Specialist Virgal Woolfolk	Date: May 15, 2015
Hydrology and Floodplain Specialist Roy King	Date: June 10, 2015
Hazardous Waste/Materials Specialist Rosanna Roa	Date: June 10, 2015
Visual/Aesthetics Specialist Steve Magallanes	Date: June 10, 2015
Energy and Climate Change specialist Virgal Woolfolk	Date: May 15, 2015
Other: N/A	Date: June 10, 2015
PEAR Preparer Virgal Woolfolk	Date: May 15, 2015

12. Review and Approval

I confirm that environmental cost, scope, and schedule have been satisfactorily completed and that the PEAR meets all Caltrans requirements. Also, if the project is scoped as an EA or EIS, I verify that the HQ DEA Coordinator has concurred in the Class of Action.

Aaron P. Burton

Environmental Branch Chief — Date: 6-12-2015

For Project Manager: Rafih Achy — Date: 6-12-2015

REQUIRED ATTACHMENTS:

Attachment A: PEAR Environmental Studies Checklist

Attachment B: Estimated Resources by WBS Code
Attachment D: PEAR Environmental Commitments Cost Estimate (Standard PSR)

Attachment A: PEAR Environmental Studies Checklist

Rev. 11/08

Environmental Studies for PA&ED Checklist					
	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Land Use	☒	☐	☐	L	
Growth	☒	☐	☐	L	
Farmlands/Timberlands	☒	☐	☐	L	
Community Impacts	☒	☐	☐	L	
Community Character and Cohesion	☒	☐	☐	L	
Relocations	☒	☐	☐	L	
Environmental Justice	☒	☐	☐	L	
Utilities/Emergency Services	☒	☐	☐	L	
Visual/Aesthetics	☐	☐	☒	L	
Cultural Resources:	☐	☐	☒	L	
Archaeological Survey Report	☐	☐	☒	L	
Historic Resources Evaluation Report	☐	☐	☒	L	
Historic Property Survey Report	☐	☐	☒	L	
Historic Resource Compliance Report	☒	☐	☐	L	
Section 106 / PRC 5024 & 5024.5	☒	☐	☐	L	
Native American Coordination	☒	☐	☐	L	
Finding of Effect	☒	☐	☐	L	
Data Recovery Plan	☒	☐	☐	L	
Memorandum of Agreement	☒	☐	☐	L	
Other:	☒	☐	☐	L	
Hydrology and Floodplain	☒	☐	☐	L	
Water Quality and Stormwater Runoff	☒	☐	☐	L	
Geology, Soils, Seismic and Topography	☒	☐	☐	L	
Paleontology	☐	☒	☐	L	
PER	☒	☐	☐	L	
PMP	☒	☐	☐	L	
Hazardous Waste/Materials:	☐	☐	☒	L	
ISA (Additional)	☐	☐	☒	L	
PSI	☒	☐	☐	L	
Other:	☒	☐	☐	L	
Air Quality	☒	☐	☐	L	
Noise and Vibration	☒	☐	☐	L	
Energy and Climate Change	☒	☐	☐	L	
Biological Environment	☐	☐	☐	L	
Natural Environment Study	☐	☐	☒	L	
Section 7:	☐	☐	☒	L	
Formal	☐	☐	☒	L	
Informal	☒	☐	☐	L	
No effect	☒	☐	☐	L	
Section 10	☒	☐	☐	L	
USFWS Consultation	☐	☐	☒	L	
NMFS Consultation	☒	☐	☐	L	

Environmental Studies for PA&ED Checklist					
	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Species of Concern (CNPS, USFS, BLM, S, F)	☐	☐	☒	L	
Wetlands & Other Waters/Delineation	☐	☐	☒	L	
404(b)(1) Alternatives Analysis	☒	☐	☐	L	
Invasive Species	☒	☐	☐	L	
Wild & Scenic River Consistency	☒	☐	☐	L	
Coastal Management Plan	☒	☐	☐	L	
HMMP	☒	☐	☐	L	
DFG Consistency Determination	☒	☐	☐	L	
2081	☐	☐	☒	L	
Other:	☒	☐	☐	L	
Cumulative Impacts	☒	☐	☐	L	
Context Sensitive Solutions	☒	☐	☐	L	
Section 4(f) Evaluation	☒	☐	☐	L	
Permits:					
401 Certification Coordination	☐	☐	☒	L	
404 Permit Coordination, IP, NWP, or LOP	☐	☐	☒	L	
1602 Agreement Coordination	☐	☐	☒	L	
Local Coastal Development Permit Coordination	☒	☐	☐	L	
State Coastal Development Permit Coordination	☒	☐	☐	L	
NPDES Coordination	☐	☐	☒	L	
US Coast Guard (Section 10)	☒	☐	☐	L	
TRPA	☒	☐	☐	L	
BCDC	☒	☐	☐	L	

Attachment B: Estimated Resources by WBS Code

D8 Environmental Planning Workplan Estimates
EA: 0R140
PM: 100/154.64
DATE: 6/11/2015

WBS	2202	2211	22xx	2209	2216	2223	2269	Total
	Envt'l QA/QC NEPA Delegation	Bio Studies/ Permits	Generalist	Desert Region Bio	Cultural Studies	Envt'l Const Monitoring	Envt'l Eng	
160	0	23	60	0		0	20	103
165	0	355	1,215	36	3,513	0	220	5,339
170	0	250	73	18	0	0	0	341
175	0	0	241	15	0	0	0	256
180	0	90	149	17	24	0	40	320
185	0	50	5	0	0	0	0	55
195	0	0	4	0	0	0	0	4
200	0	0	0	0	0	0	0	0
205	0	381	10	7	0	0	0	398
225	0	0	0	0	0	0	0	0
230	0	100	14	0	20	0	40	174
235	0	150	141	15	4,814	0	50	5,170
245	0	0	0	0	0	0	0	0
255	0	100	20	5	16	12	50	203
260	0	100	30	5	16	0	22	173
270	0	0	28	5	0	353	20	406
280	0	500	0	0	2,857	0	0	3,357
290	0	0	0	0	0	0	0	0
295	0	0	20	10	0	200	20	250
Total	500	593	2,010	133	390	565	924	16,549

Attachment D: PEAR Environmental Commitments Cost Estimate

Standard PSR Only

(Prepare a separate form for each viable alternative described in the Project Study Report)

PART 1 PROJECT INFORMATION *rev. 11/08*

District-County-Route-Post Mile 08-SBd-40	EA: 0R140 PN: 0812000024
Project Description: Interstate 40 (I-40) Re-Grade Median Cross Slope (EssexRoad to State Line)	
Form completed by (Name/District Office): Aaron Burton/Division of Environmental Planning, District 8	
Project Manager: Rafih Achi	Phone Number: (909) 388-4077
Date: 6/11/2015	

PART 2 PERMITS AND AGREEMENTS

	Permits and Agreements **($$)**
Fish and Game 1602 Agreement	5000 (Maximum Amount for 1602 permit)
Coastal Development Permit	
State Lands Agreement	
Section 401 Water Quality Certification	90000 (Maximum Amount for 401 permit)
Section 404 Permit – Nationwide (U.S. Army Corps)	
Section 404 Permit – Individual (U.S. Army Corps)	
Section 10 Navigable Waters Permit (U.S. Army Corps)	
Section 9 Permit (U.S. Coast Guard)	
Other:	
Total (enter zeros if no cost)	

PART 3. ENVIRONMENTAL COMMITMENTS FOR PERMANENT IMPACTS

To complete the following information:

- Report costs in $1,000s.
- Include all costs to complete the commitment:
  - O.K. to break down by phase: Design, ROW, Construction, and/or provide Sub-Total.
  - Capital outlay and staff support. Refer to Estimated Resources by WBS Code. For example, if you estimated 80 hours for biological monitoring (WBS 235.35 Long Term Mitigation Monitoring), convert those hours to a dollar amount for this entry. For current conversion rates from PY to dollars, see the Project Manager.
  - Cost of right of way or easements.
  - If compensatory mitigation is anticipated (for wetlands, for example), insert a range for purchasing credits in a mitigation bank.
  - Long-term monitoring and reporting
  - Any follow-up maintenance
  - Use current costs; the Project Manager will add an appropriate escalation factor.
  - This is an estimating tool, so a range is not only acceptable, but advisable.

Environmental Commitments Alternative					
	Estimated Cost in $1,000's				Notes
	Phases				
	Design	ROW	Construction	Sub-Total	
Noise abatement or mitigation					
Special landscaping					
Archaeological resources					
Biological resources		500		500	Mitigation Land
Historical resources			500	500	
Scenic resources	0	0	0	0	
Wetland/riparian resources	0	10	0	10	Riparian / Wetlands Mitigation
Res./bus. relocations					
Other:					
Total (enter zeros if no cost)	0	510	500	1010	

ATTACHMENT H

INITIAL SITE ASSESSMENT (ISA)

INITIAL SITE ASSESSMENT (ISA) CHECKLIST

DATE: **9/10/14**

PROJECT INFORMATION
District **08** County **SBd** Route **40** Post Mile **R100/R154.64** EA **0R140** PN **08-1200-0024**

Description of Work: **Re-grade Median Cross Slope with 1:10 or flatter at various locations.**

Project Engineer **Don Bao** Telephone **(909) 806-3936**

Environmental Coordinator **Virgal Woolfolk** Telephone **(909) 383-1593**

DATE ISA NEEDED **12/3/14**

Attach the project location map and an aerial photo to this checklist to show the location of proposed R/W and all known and/or potential hazardous waste sites.

1. Project Features: New R/W? **NO** Excavation? **YES** Railroad Involvement? **NO**
   Structure Demolition/Modification? **NO** Utility Relocation? **NO**
2. Project Setting: Rural - **YES** Urban -
   Current Land Uses: **Existing state hwy median**
   Adjacent Land Uses: **desert**
   (Industrial light industry, commercial, agriculture, residential, other)
3. Check Federal, State, and local environmental and health regulatory agency records as necessary to see if any known hazardous waste site is in or near the project area. If a known site is identified, show its location on the attached map and attach additional sheets as needed to provide all information available pertinent to the proposed project. IS PROJECT
4. AFFECTING SITES LISTED ON CORTESE LIST? **NO** IF YES, DESCRIBE SITE:_
5. Conduct Field Inspection _____ Date _____

Storage Structures/Pipelines:				Contamination: (spills, leaks, illegal dumping, etc)		Hazardous Materials: (asbestos, lead, etc.)	
UST's	NO			Surface Staining	NO	Buildings	NO
Surface tanks	NO			Oil Sheen	NO	Sprayed-on Fireproofing	NO
Sumps	NO	Ponds	NO	Odors	NO	Pipe Wrap	NO
Drums	NO	Basins	NO	Vegetation damage	NO	Friable Tile	NO
Transformers	NO			Other		Acoustical Plaster	NO
Landfill	NO					Serpentine	NO
Other						Paint NO	Other

Other comments and/or observations: **In the PS&E package include the attached SSP 7-1.02B Earth Material Containing Lead for non-hazardous soils within the median. This SSP requires a Lead Compliance Plan, Bid Item #070030, cost $5,000.**

ISA DETERMINATION:

Does the project have potential hazardous waste involvement? **LOW RISK**

If there is known or potential hazardous waste involvement, is additional ISA work needed before task orders can be prepared for the Preliminary Site Investigation? If yes, explain, and give estimate of additional time required:

ISA CONDUCTED BY: Rosanna Roa **DATE:** **9/10/14**

ROSANNA ROA, ENV. ENG. MS-824
DISTRICT 08 HAZARDOUS WASTE COORDINATOR
(909) 383-5917

ATTACHMENT I

PROJECT INITIATION PROPOSAL (PIP)

STATE OF CALIFORNIA — PROJECT INITIATION PROPOSAL (PIP) — DEPT OF TRANSPORTATION
PROGRAM MGMT. — FOR CAPITAL OUTLAY AND MAINTENANCE (HM) PROJECTS
Revised March 2011

RECEIVED
2011 MAY 26 AM 4:14
PROGRAM/PROJECT MGMT.

DATE REC IN PM: | Project ID # 0812000024 | E.A. 0R140 | PIP NO. 3702

A. Originating Office

Senior / Branch Chief	Haissam Yahya	Date	5/18/11
Contact	Ferry Fard	Telephone Number	(909)383-4065
		Telephone Number	(909)383-6499

LOCATION: SBD-40-R100.00/R154.64 (Co-Rte-Post Mile)

Near Needles, Essex Road to Arizona State Line (Geographic)

ISSUE:

Analysis of data from the Traffic Accident Surveliance and Analysis Sytem have shown a history of runoff accidents in the median on this segment of Interstate 40. The adivsory standard for median cross slope is 10:1 or flatter. The existing median cross slope exceed the standard 10:1 or flatter slope.

PROPOSAL/SOLUTION(S):

To improve the roadway safety of traveling public, traffic operations recommends improving the roadside design by providing flatter median slopes, it is proposed to regrade the median within the project limits to provide a standard 10:1 median slope or flatter. A roadside with flattened slopes enhances the opportunity for reducing the severity of the crash. Upgrading existing highway roadside design features within the project limit is expected to reduce the number and severity of accidents. The project will be funded under Highway Safety enhancement Improvement program

AGREEMENT REQUIRED: YES: | NO: X | AGENCY:

PERFORMANCE MEASURES: NUMBER: 163.92 | DESCRIPTOR: Collisions Reduced

EXPECTED ENVIRONMENTAL DOCUMENT: CE

PRELIMINARY ESTIMATE

CONST:	Roadwork =	$15,906,000	Structures =		Total =	$15,906,000
	State Share =		Local Share =			
R/W :	Acquisition =		Utilities =		Total =	$0
	State Share =		Local Share =			

TOTAL PROJECT COST: (CONST + R/W): $15,906,000

B. PROGRAM MANAGEMENT ONLY: PROGRAM CODE: 201.015 | PMCS CODE: HB1

Proposed Funding: SHOPP FY: PND

Project Type: Major: X | Minor: | Permit: | Maintenance (HM):

Project Manager: Rafik Achy | Functional Manager: Greg Ramirez

Comments:

For Review: PIP is ready for District Review.

For Approval: I recommend this PIP for approval R.F. 7/21/11

PID / PR TYPE: PSR | Reviewed by: Angie Schmeh | Date: 6/11/11

C. FINAL DISPOSITION BY DDD:

Project: Approved as Submitted: ✓ | Rejected: | Approved With Conditions(See Comments):

COMMENTS:

✓ DDD Program/Project Management
DDD Maintenance

Date: 7/21/11